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Gleanings in Bee Culture

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Apiaries such as this can often be bought for a "song," but unless you improve it you will be singing a different tune. There is perhaps nothing so profitless as a run down apiary. Colonies that are uniformly strong is the keynote to profits in beekeeping. A hive of bees, whether it produces 400 pounds or 40 pounds of surplus honey, requires about the same amount of time and equipment. It is good beekeeping to have a strong force of bees in a hive and better beekeeping to keep them producing.

Tomorrow's Beekeeping

By Clarence Tontz

"We're going to have a little place of our own when the war's over!" Many times the past two years I have heard this familiar phrase spoken by defense workers. Even now they are making payments on property destined to be their future home.

A good many that I have talked to plan on keeping bees. Some don't know a drone from a queen; others have had a few hives of their own or worked for commercial beemen. The main thing to them is that for the first time in their lives they will be able to "put spot cash on the barrelhead" for a small place.

During these war years conditions haven't been exactly quiet on the beekeeping front. Anyone who goes into beekeeping after the war will be confronted by new problems, some discouraging, others helpful. Any old timer in the game will tell you that the beekeeper "gets it in the neck" about as often as anyone.

The outstanding value of beekeeping, for instance, is not to the beekeeper himself but to vegetable, fruit, and legume growers who benefit from increased yield due to pollination. Yet (as has happened in California and Arizona), beekeepers have suffered severe losses from bee poisoning due to careless spraying of insecticide dusts by growers.

A great deal of time (accompanied by headaches, I venture) has been spent by researchers in developing a bee resistant to American foulbrood. About the time they get a bee developed that promises to not only help control but eventually eradicate the disease, along comes some notorious publicity on Nosema. Lloyd Gardner, one of Ohio's largest honey producers, calls Nosema the beekeeper's No. 1 enemy. In a 10-year period, as stated in the May issue of this journal, Nosema has robbed him of three complete honey crops and reduced the crops in other seasons. The worst part is that lit-

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tle is known of the cure and less about the cause.

And isn't it ironical that soybean flour should be the ideal feed to increase the bee population to gather nectar from thousands of acres of nonexistent clover that—yes, you guessed it—the soybean has replaced?

But don't be discouraged (as though any one with bee fever could be) for tomorrow's beekeeping is still very promising. Even though you do experience dearths of natural pollen or your field bees are "grounded" by adverse weather, you can pretty well depend on maintaining strong colonies, thanks to pollen-soybean flour cakes.

You will be able to work with bright yellow Italian bees gentle as cows (tame cows, I mean). For at least five years southern shippers have been producing quality bees that are slow to sting but fast on stacking up the honey supers. Beekeepers who tell you that it takes mean bees to really bring in the honey just haven't caught up yet. I remember a particularly nasty day several years ago in Wisconsin—cold and cloudy. We first worked an old established yard. The atmosphere was thick; the bees ugly. They didn't even wait for a decent excuse to sting, but struck on the least pretense. We savagely poured thick columns of smoke at the clustering masses of bees. Their roar of frustration was continuous, yet they continued sending out "antoginogists". From out of the murky atmosphere, like dive bombers, they shot for our hands, with abdomens curved, stingers extended and dripping with poison. When we finally finished that yard we had to throw up a dense smoke screen in order to "execute an orderly retreat."

On an average, five gentle colonies can be worked in the time it takes to work a mean one. Quite a saving in the labor item. Worked during an intense honey flow, a mean colony can seriously suffer a cut in honey production by the great amount of smoke required to keep the bees at bay. The queen herself may be harmed by a blast from an over-worked hot smoker.

From the yard of mean-tempered bees we went to a package yard. The weather was even colder, yet we received one or two stings each while working this high-producing yard in record time. Some beekeepers have told me that all package bees are more or less gentle. I have found by experience that package bees can be pretty tough, some the minute you open the screen to install them.

This post-war period will probably bring out a larger group of "small men" able to buy outright their farm or bees than at any time in the history of the United States. This, of course, is a direct aid to the beekeeping industry. With their place all their own, they can better afford to weather the ups and downs of beekeeping. Fewer of them will be forced to neglect their bees to take up intermittent jobs.

The best bet, I believe, for anyone going into beekeeping is to buy out another beekeeper in a good location. Good locations are likely to someday be at a premium. Don't worry about the condition of the equipment. Make sure it is reasonably free of disease and pay for it accordingly. There is one important thing to remember. If you buy a run-down apiary for a song and don't give it a thorough clean-up, you will likely be the one who pays the piper.

Recently I talked with a beekeeper from Idaho who had bought a run-down bee business of 200 hives with supers, a honey house, and two acres of land for one thousand dollars. He was quite upset when he found upon examining his bargain that half of the bees were infected with A F B. With the help of the local bee inspector, he outlined a clean-up program. That same season spending only a part of his time with his bees, he got back his initial investment.

However, anyone buying a bee business of any size without previous experience is courting disaster. I know two farm boys who had saved two thousand dollars to buy a farm. At the last moment, because someone told them that there was more money in 160 hives of bees than in 160 acres of land, they bought the bees and new equipment. They had had no experience with bees and scorned "book beekeeping." No disease struck their bees and beekeepers about them harvested a fair crop, yet these beginners went into the red so far they sold the entire lot for a fraction of the original cost. **Yes, there's money in honey but before you invest, investigate!**

Hive Management in Alberta

By W. G. le Maistre
Provincial Apiarist

The purpose of this article is to describe what systems of management are generally employed in Alberta and why they came into use. They are far from being beyond criticism. Improvements on them are gradually being made.

The fact that the average yield of honey in Alberta has been about 120 pounds, which is relatively high, should be attributed to geography rather than management.

In order to understand the practices that are followed it becomes necessary to know some of the various circumstances which led to their adoption.

Beekeeping, to any great extent, first became established in southern Alberta where crops are grown under irrigation, and the management practices that were used in these irrigated areas spread to other places to which they were perhaps not so well adapted.

Irrigated Conditions

The irrigated areas have an average annual rainfall of about 15.7 inches, with an abundance of sunshine. The main honey flow begins about June 15, and becomes intense during early July and ending about the 25th of that month. There is often a secondary flow lasting through August and into September. This secondary flow is sometimes heavy though as a rule the bulk of the crop is obtained during the first four weeks of the main flow.

Another feature which has influenced management is the chinook winds. A chinook, in case you do not know, is a warm dry wind occurring in the winter time. The temperature may be below zero when suddenly this warm wind begins to blow. It may raise the temperature to 50° F. above zero almost at once. This melts the snow and colonies become quite active. It may last two or three days or more. Then perhaps a blizzard and below zero weather again sweeps in.

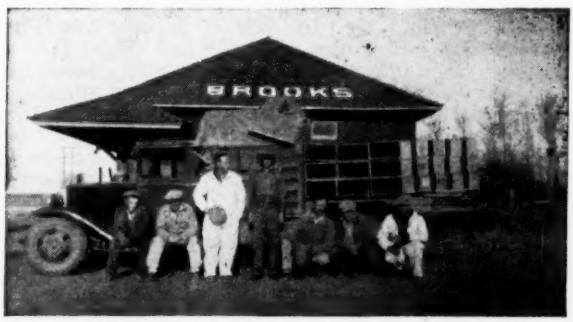
It is claimed that these conditions make it difficult to winter bees, though one suspects that other factors have had a greater influence since there is ample evidence to show that colonies are being successfully wintered. The other factors are probably the cost of labor, which, during the harvest time, is usually rather high in these districts; the lack of certainty of spring condition of wintered-over colonies; conveniences and comparative cheapness of bringing in packages. Incidentally, this last named cause for not wintering bees is being removed because packages have become very expensive and cannot be relied on as formerly.

One other climatic characteristic that has influenced practices in honey production is the low relative humidity. Partially capped honey often has a moisture content of only 16 per cent.

The following description is an outline of the activities of beekeepers operating colonies on a commercial scale in the irrigated areas of southern Alberta.

Packages Used

In these irrigated areas at least 95 per cent of all colonies are estab-



Packages arriving from California for Morgan's 1000-colony apiaries in an irrigated district in Alberta.

Philpott's hives. Package colonies in a nursery yard for feeding.

Irrigated alfalfa in Alberta. Philpot's hives in the lee of windbreaks

lished from packages each spring. These begin arriving during the first week in April and are, as far as possible, all in their hives by the first of May.

The best operators prepare the hives that are to receive these packages with care. Each brood chamber is provided with combs containing from 20 to 30 pounds of honey, saved from the previous fall; and a comb or two well filled with pollen. Besides this, about ten pounds of sugar per colony are fed as syrup in the hives. The reason for all this feeding is that early sources of nectar are not nearly abundant enough to encourage maximum brood production.

The packages are installed in the hives as soon as possible after their arrival and left without examination for from one to two weeks. Then a sufficient inspection is made to determine if eggs are present and to replenish feeders. Any colonies found to be without eggs are immediately united with those that are queenright (this is practiced all through the season when queenless colonies are discovered.) When uniting, a newspaper is sometimes used between the two colonies, but it does not seem to be important at this season and often it is not used.

The reason that no effort is made to requeen queenless colonies at this time is partially that, frequently, the queens will not be accepted, but really that there is a maximum of seven or eight weeks that these packages have in which to produce large field forces. Ten days without brood makes it impossible for this to be accomplished.

Early in May, the dandelions appear in remarkable abundance, the country becomes a golden yellow. This bloom may last about three weeks in any significant amount. It is seldom that the bees derive much nectar from them, though they will obtain quantities of pollen, given good weather. Furthermore, May and early June are the periods during which it may be wet and cool, thus bee flight is frequently materially limited. Because of cool weather, beekeepers are not too hasty to add the second brood chambers to their hives. They are usually on by the middle of May with the early ones and the end of May with the later ones. A period of near starvation is often evident during the first week of June. Quite often colonies have to be fed after the dandelion flow. Their populations and brood are becoming considerable and no nectar becomes available until the tenth of June. All colonies not up to strength by June 15th are united

Swarming Troubles

Then suddenly, from a hand to mouth existence the colonies begin to acquire surplus honey about June 15th. The clovers have been in bloom for a week or ten days and are really yielding nectar. Now, after cool wet weather confining bees to the hive and heavy brood rearing, every beekeeper knows what is going to happen if he does not do something about it.

The most common swarm preventive measure practiced is for the beekeeper to shake the bees off the combs, destroy the queen cells wherever they are found and add supers. This is a desperate game when perhaps 500 hives have all to be manipulated in this manner at once.

Some of the more enlightened operators start demareeing their colonies about June 10. And probably have all completed before swarming overtakes them.

It might be interesting to note here that probably 50 per cent of these colonies, built up from packages by these beekeepers in the irrigated areas, will swarm, unless some action, more drastic than merely adding supers above the double brood chambers, be taken. There may be an explanation; it may be that the supers should be added a week earlier, it may be the altitude, it may be the beekeeper, or the nature or break of the honey flows, but

nevertheless this is what is likely to happen.

Extracting Begins

About the end of the first week of July extracting begins. It is true the combs are not fully nor even two thirds capped, but the relative humidity is so low that the honey will probably grade less than 17 per cent moisture and water white. Once the extracting plant is put into operation it is kept going, because colonies are operated with the average of only two or three supers for honey storage—they must be kept moving. No sooner is one load of supers extracted than back they go to the apiaries to take the place of the next load to be removed from the hives.

Preparing for Fall

About the tenth to the end of August all queens are killed or caged. Since the colonies will not be wintered it is necessary to eliminate brood before storing the equipment. Some beekeepers, those that cage their queens early, examine their brood chambers within ten days and destroy the queen cells that will be discovered. Those who destroy the queens late in August permit the young queens to emerge. All colonies will be gassed with Cyanogas and the brood nests stored by the end of September. It will be three weeks from the time the queen has been killed before the new queen will have brood.*

The reason that the queen is caged is to keep the colony from becoming demoralized as does a queenless one. This reasoning is not quite sound because as long as the colony does not become hopelessly queenless, colony morale is maintained. Queen cells are built almost as readily by colonies with caged queens as by those with killed queens.

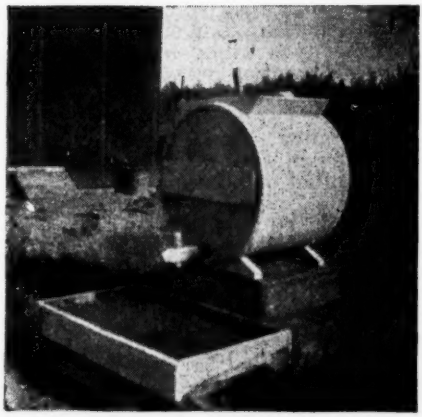
This outline of the season as given for southern Alberta applies to some extent to beekeeping in the central and northern part except that the main honey flow does not begin until ten days or two weeks later—June 25. The relative humidity is higher and combs need to be left on the hive longer to permit the honey to be ripened. Honey and pollen flows are more varied and abundant in the spring. Winter weather is colder but rather less violently changeable. About 30 per cent of the colonies are wintered-over with good results. The average yield of honey is probably about 100 pounds as compared to 140 pounds farther south.

Edmonton, Alberta, Canada

*Some beekeepers place a queen excluder under each brood chamber, after the queens are killed, to prevent virgin queens from mating.

Water for Bees

We receive letters from beekeepers over the country wishing to know how their bees may be kept from the neighbor's bird baths or watering troughs. Beekeepers in small towns may find it convenient to have a watering place for bees, similar to the one shown in the picture. It will be noted that the water drips slowly through the spigot into a trough or container with small pieces of wood and burlap. These watering places should be established quite early in the season to get the bees started before locating other sources on the neighbor's properties.—Photo by Thos. Wiley, Sarona, Wisconsin.



Wintering

By E. R. Root

(From the 1945 edition of the ABC & XYZ of Bee Culture)

This is a problem of preparing honeybee colonies outdoors in hives or a cellar so that they may survive the winter in good condition regardless of climatic conditions. It is the problem also of putting the colony in a condition to stand the cold. Methods will be given further on; but first we will discuss some of the factors necessary to good wintering.

There is perhaps no single subject where there is such a diversity of opinion among authorities as on this general subject, and this perhaps is explained on the basis of locality, and locality covers climate, with its variations, moisture, and a supply of nectar and pollen at the right time of year. A brief analysis of these factors will help to explain why these differences of opinion.

The Prevailing Climate

Starting with a climate where the average winter cold ranges slightly below and sometimes considerably above zero F., it may perhaps be advisable to use insulation or packing around the hives, if wintered outdoors. During some years when the winter is mild, bees winter well in hives packed and unpacked provided there is a sufficient force of bees and stores to carry them through.

Lack of Honey and Pollen

In localities where there is little or no fall pasturage, colonies very often go into winter quarters too short of stores and they starve. If there should be a cold backward spring so that the bees could not gather nectar and pollen, they may starve, while early spring pasturage would save them.

There are other localities where there is a great deficiency of essential pollen both in the fall and in the spring.

The new doctrine of wintering calls for either a large supply of natural pollen or pollen substitute, or a pollen supplement in the form of cakes placed on top of the cluster to supply the deficiency of the natural product. This, as will be explained later, will greatly increase the amount of brood and bees.

Excess Moisture

Again, moisture, especially excessive moisture within the hive where the bees are wintering, is now considered to be far more serious than in former days when the excess of water was absorbed by cushions on top. (If this moisture goes into cushions and freezes, such packing is worse than nothing.) In localities along the Pacific or Atlantic coasts of this country and Great Britain, there is usually an excess of moisture but with a mild temperature modified by the ocean's breezes, bees will winter well provided means are employed for the escape of moisture either by wide open entrances or by upper entrances. In such localities opinion and general practice favor little or no packing or insulation of the hive itself but an abundance of stores consisting of honey and pollen in a two-story hive with an upper entrance. In New Jersey, for example, some scientific work proves that colonies without packing do better than those that are packed year in and year out.

Locality

So far we have mentioned only a few of the factors that have an important influence on how bees shall be prepared for winter. In all our thinking and in all our practice we will have to be governed somewhat by locality. However, Dr. Farrar, as mentioned elsewhere, believes that if the colonies are properly prepared with a sufficient amount of pollen and honey and numerically strong, occupying two and three stores, they will winter safely almost anywhere provided Nosema disease does not get a foothold.

Some of the Heresies of the Past

It will be proper at this point to mention some of the mistakes made in the past. Soon after the Langstroth movable frame was introduced in the late 50's of the previous century, bees were wintered mainly in box hives, many of which were relatively larger than a single story standard Langstroth hive. The hives were also relatively tall with occasional open knot holes or cracks in the side. In spite of bad weather, and poor localities, those bees generally wintered well, while others of course died.

The Heresy of Hives Too Small

Not so many years ago it was the universal practice to winter bees in a single story Langstroth hive. Of

course the colonies would be relatively small. Twenty pounds of sugar syrup was considered ample to carry a colony through winter. With little or no pollen the colonies would dwindle, become weak and then came spring dwindling and dysentery. Even the best of packing did not guarantee that the bees would winter. Now the new doctrine is to have our colonies through ample pollen reserves, strong enough to occupy two hive bodies. In mild climates it is doubtful if such colonies need packing.

The Sugar Syrup Heresy

In those days it was held that sugar syrup should be used in place of honey, going so far as to say that even good honey might cause dysentery and therefore a food like sugar syrup that contained no pollen should be used because pollen was believed to be the cause of dysentery.

It is now definitely known that the real cause of dysentery is certainly not honey of fair quality, nor any honey if it is well capped in the comb. The colony should be large enough numerically to occupy two stories of a Langstroth hive.

The Pollen Theory Heresy

Back in the early days we had what we called the pollen theory based on the fact that undigested pollen grains could be found in the intestinal tract of many bees that had died of dysentery. Instead of pollen causing dysentery, conclusive evidence is now available that colonies throughout the country are prevented from building up because they lack pollen. Unless there is plenty of good well ripened honey and pollen the colony, if it can not secure a spring supply, will become weaker and weaker until dysentery develops.

(To be continued in next issue.)

Recent Meetings

The Summer Meetings of Ohio Beekeepers' Association held in Cleveland on July 30 and in Delphos on July 31 and August 1 were well attended. our out-of-state speakers as well as local talent appeared on the program.

Dr. W. E. Dunham, of Ohio State University, called attention to the transition period through which beekeeping is passing. Clover is giving way to soybeans in some areas. However, sweet clover is likely to come back. It is more necessary than ever to have all colonies at peak of strength early to secure surplus.

R. B. Wilson of John G. Paton Co., New York, stressed importance of safeguarding and improving bee pasture. The Honey Plant Committee of our national organization has an important job ahead. In the opinion of Mr. Wilson, Foreign black honeys now found on some grocers' shelves are not good for the market but the comparison with good palatable honeys may prove helpful.

Elmer Carroll, editor of **The Beekeepers' Magazine,** brought greetings from Michigan beekeepers and made a number of helpful suggestions on developing a healthy state organization. The Michigan association has some worthy objectives and is doing splendid work, both for Michigan beekeepers and our industry.

Harold Clay, of Washington, says there is no real danger of honey rationing at present. Black marketing is not so prevalent this year as last year. Makers of crackers want dark or strong flavored honeys but milder boneys are needed for cakes with short baking periods. Buckwheat honey is being used to flavor ice cream, with good results.

Lloyd Gardner, of Delaware, Ohio, says moving bees to fall locations has proved worth while. He prefers screening tops and closing entrances.

Emerson Long also stressed the necessity of wintering colonies so that the hive populations early in spring can be built up to take advantage of early flows.

The Summer Meetings of the Michigan State Beekeepers' Association were held in Sylvania, Ohio, on August 2; at Ithaca, Michigan, at the home of Dr. Potter on August 3; Traverse City, Michigan, on August 4 at the home of Frank Slusser; and Burt Lake State Park at Cheboygan, Michigan, on August 5.

Several of the speakers who appeared at the Ohio meeting were also present at some of the Michigan meetings. Among these were **Charles**

(Continued on page 415)

Winter Packing Pays

By Shirl Baker

During the fall of 1942, we had just about finished preparing the bees for winter, only 20 more colonies to pack in a yard of 42, when very suddenly the weather turned into a real winter snowstorm. We gave up the work thinking it would soon pass and become mild again and we would be given a last chance to finish the work. But within a few days the storm became so bad it was impossible to get to the yard so consequently those 20 colonies were left unpacked all winter.

Two visits were paid to the yard on foot, one in January and one in February. The yard is located in a growth of trees and small brush, with a southern exposure. The hives were well covered with snow in January but it had melted away some in February. The last of March an examination was made. Among the 22 that were packed two were dead, the remaining 20 in fair to good condition. The twenty unpacked colonies were a sorry sight. Twelve dead, four poor, and four in fair to good shape. All the dead hives had honey left.

During the succeeding honey flow the four poor ones did not produce any honey, but had built up to full strength by the end of the season. The four that were found to be of good condition gave an average crop. All but one of the packed colonies developed into good average producers.

This yard was carefully checked during the late summer before for failing queens and requeened where thought necessary. They were all in excellent condition in late fall, in regard to good clusters of bees and stores.

Why was it that the four in the unpacked group came through the winter and developed into good producers? Were some conditions present within the cluster that the others did not possess? If such be the fact, what are they and how are they recognized?

If some colonies are able to withstand adverse weather conditions, while others a few feet away are unable to survive, there must be some trait of hardiness present about the bees or within the winter cluster, that colonies that die out do not possess. If there are any such traits or factors, it would seem that it would be entirely possible to breed a strain of bees that could stand outdoor wintering in the North, unpacked, with a minimum of loss. Much has been done in the way of breeding a better honey producing strain of bees. Why not a winter resistant strain?

In our opinion, it certainly is best to give the colonies winter protection, at least until the time comes when we can winter bees unprotected with no more than a five per cent winter and spring loss. We use tarred paper and chaff for winter packing, from two to four inches of fine clover chaff between the paper and hive. This makes a light pack so widely recommended. The bees are left packed until about May 10th, or until the danger of hard freezing weather has passed.

In the case mentioned the loss in the unpacked group was something like 60 or 65 per cent greater than among the packed colonies.

Of course, during a mild winter the percentage, no doubt, would have been considerably lower. Even though mild winters are frequent they may turn out to be bad ones after all, so it seems better to pack the bees than to take a heavy loss and feel sorry afterward.

Rodney, Michigan

"I want a hive body—and the need is urgent."

Mr. Wallace C. Swank

A Profitable Avocation

By Aubrey Cribb

Love of bee culture has an outstanding exponent in Wallace C. Swank, near Eaton Rapids, Michigan, who to his major occupations as school teacher and producer of an average of 15,000 pounds of honey a year has added bee demonstrations for school classes.

Marking completion of a quarter of a century's work with bees was Mr. Swank's construction last year of a new concrete honey house, which marks his home as one of the centers of bee interest in the community.

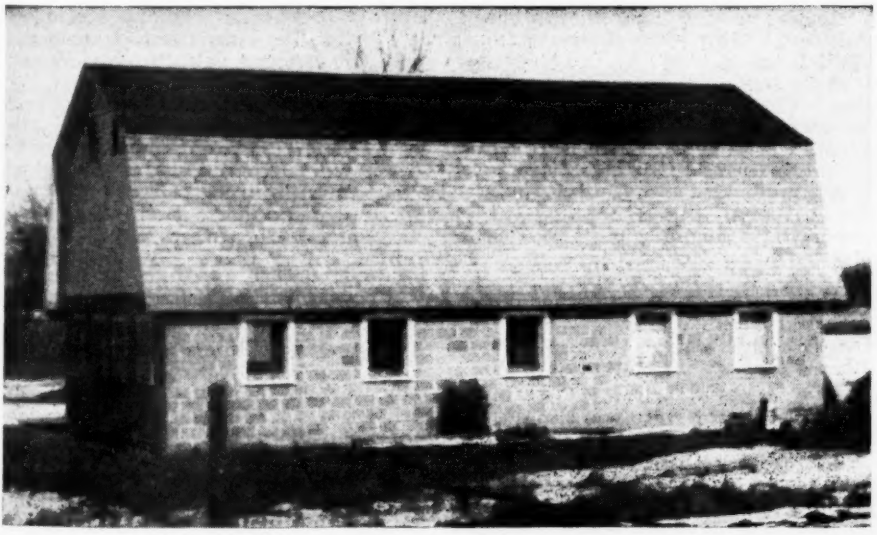
War time priorities have hindered him in adding all the equipment he plans to use, but the structure is completed now and in readiness. Mr. Swank made the plans for it himself, and did a major part of the work on it, thus holding his outlay of costs to less than $1,000. The building is 24 ft. x 40 ft. with walls of concrete masonry and floor of concrete so as to be quickly and easily cleaned.

Happiness over this addition to his beekeeping properties, with which he hopes to increase his annual output to more than his present average, extends also to Mrs. Swank, who sees in its utilization a chance to get some of the "supers" out of her house. "He was just about driving me out of house and home with bee supplies", Mrs. Swank said.

Mr. Swank learned beekeeping at the age of 13, from his older brother. When he went to Michigan State College his bees helped pay his way. Out of college he started teaching, but kept at bee culture. In 1924, he moved to his present home on Route M-50 outside of Eaton Rapids where he made beekeeping his chief avocation and his home a center of bee interest in the community.

Betokening the man behind it is the blue and yellow label he uses on his honey packages, on which he has kept this statement: "Love and good will are the greatest constructive forces on earth."

Columbus, Ohio.



Honey processing house of Wallace C. Swank at Eaton Rapids, Michigan.

Portable Honey Treats

By Mrs. Benj. Nielsen

All-Bran Honey Wafers—Photo courtesy Kenyon & Eckhardt, Inc.

Once again the youth of our nation pay heed to the call of the classroom —some eager, some reluctant. Mothers are concerned with the responsibility of packing nutritionally sound and appetite stimulating lunches for that mid-day pause in mental concentration. Portable foods —"good carriers" are the order of the day. Out comes the file of honey recipes and Mom dons her apron to whip up tasty honey lunch box specials.

How fortunate are we mothers here in this country! Recently at a gathering the speaker described the deplorable conditions under which the youth of the conquered countries of Hitler's Europe are being taught. In secret hideouts, known only to the underground, without books, paper, or pencils, determined, staunch hearted oldsters are trying to teach poorly clad, half-starved children. How much could you, could I, teach "out of our heads", so to speak, and without supplies of any kind? Food for thought! And only the most alert, most intelligent are selected for even this sorely limited education; for a slip of the tongue, or an unguarded move might unwittingly reveal this forbidden work and swiftly bring death to pupils and teachers. No—"What can I fix that will be tasty and good for the lunchbox tomorrow and how will I ever find time to fix it?" is not the pressing problem of the mothers in these war-ridden countries.

So if a bit of self pity has inadvertently crept into our thoughts during these tense hectic days of stress, strain, and uncertainty, comparing our lots should instantly sweep away such thoughts. Our way of living may be somewhat cramped—it's only temporary and we have SO much to be thankful for! Utter a prayer of thankfulness that we can still reach for the honey jar; have honey to stir into sandwich breads; have honey spreads to cover them; can substitute mouth-watering honey nut breads, coffee cakes, and honey buns when breads pall; extend point-precious butter with honey; moisten peanut butter, chop nuts and other fillings with honey to combat dry sandwich complaints; pack honey canned fruits in Dixie cups; perk up milk for the lunchbox thermos with honey chocolate syrup —to delight small fry—big fry, too.

Here are a few honey portables we especially like and here's hoping they help you through days that are crowded to the limit and delight the youngsters who unpack them at noon time.

All-Bran Honey Nut Bread

One egg, 2/3 cup honey, 1 cup less 2 tablespoons milk, 2 tablespoons melted shortening, ¾ cup Kellogg's All-Bran, 2¼ cups flour, 1 teaspoon salt, 3 teaspoons baking powder, and 3/4 cup chopped nut meats.

Beat egg until very light, add honey, milk, shortening, and All-Bran. Sift flour with salt and baking powder; combine with nut meats; add to first mixture, stirring only until flour disappears. Bake in greased loaf pan, with waxed paper in the bottom, in moderate oven, 350 degrees F., about 1 hour and 10 minutes. Yield: 1 loaf (4½ x 9½ inch pan).

Refrigerator Honey Ginger Snaps

One-half cup shortening, ½ cup sugar, ½ cup honey, ½ cup Kellogg's All-Bran, 2 cups sifted flour, 1½ teaspoons ginger, 1½ teaspoons cinnamon, 1½ teaspoons soda, and ¼ teaspoon salt.

Blend shortening and sugar thoroughly; add honey and All-Bran and mix well. Sift flour, ginger, cinnamon, soda, and salt together and work into creamed mixture a small

amount at a time. Mix well; knead and shape into roll about 1½ inches in diameter. Wrap in waxed paper, covering ends so that dough will not dry out. Store in refrigerator until firm. Slice very thin and bake on ungreased baking sheet in moderate oven, 375 degrees F., about 10 minutes. Yield: 5 dozen cookies (2 inches in diameter).

All-Bran Honey Wafers

One-half cup butter or substitute, ½ cup honey, ¼ cup whole bran, 2 cups sifted flour, 1 teaspoon soda, ½ teaspoon cinnamon, ¼ teaspoon cloves, ¼ teaspoon all-spice.

Boil butter and honey together for one minute; cool. Crush whole bran slightly. Sift flour with soda and spices and add to first mixture with the whole bran; mix thoroughly; chill. Roll dough on floured board to about 1/16 inch thickness. Cut with floured cookie cutter and bake on greased baking sheet in moderate oven, 350 degrees F., about ten minutes. Yield: 5 dozen cookies (2¼ inches in diameter).

Fig Honey Fudge Brownies

One-half cup shortening, ½ cup honey, 2 eggs, beaten, 1 teaspoon vanilla, 2 squares chocolate or 6 tablespoons cocoa, ½ cup sifted flour, ½ teaspoon salt, 1 cup chopped dried figs, ½ cup chopped nut meats.

Cream shortening and honey until light and creamy. Add eggs, vanilla, and melted chocolate and beat well. (When cocoa is used, sift with flour). Add flour and salt and beat until blended. Stir in nut meats. Bake in a greased nine-inch pan in a moderate oven, 350 degrees F., about 30 minutes. Do not remove from pan. When cool, cut in squares. Makes three dozen delicious cookie squares.

Honey Cinnamon Circles

One cake compressed yeast, 1 tablespoon honey, ½ cup shortening, 1 cup hot milk, ⅓ cup honey, ½ teaspoon salt, 2 well-beaten eggs, and 4 cups sifted flour.

Crumble yeast and blend with 1 tablespoon honey. Add shortening to milk; cool to lukewarm. Add yeast and mix thoroughly; add ⅓ cup honey, salt, eggs, and 2 cups flour; beat 2 minutes. Add remaining flour to make soft dough; cover and let rise until double in bulk, about 3½ hours. Divide in 2 parts and roll to ¼ inch thickness. Spread with jelly filling made by blending ½ cup brown sugar, 1 teaspoon cinnamon, 2 tablespoons honey, 5 tablespoons softened butter and ⅓ cup currant jelly. Roll jelly-roll fashion; cut in 1-inch slices and place, cut side down, in greased, shallow pan or on greased baking sheet. Cover and let rise until double in bulk, about 2 hours. Bake in moderate oven, 375 degrees F., about 20 minutes. Makes 18 rolls.

Honey Wheatsworth Coffee Cake

One cup sifted Wheatsworth flour, 1 cup sifted all-purpose flour, 2½ teaspoons baking powder, 1 teaspoon salt, 6 tablespoons shortening, 1 egg, beaten, ¼ cup honey, 2/3 cup milk, ½ cup seedless raisins, 1 cup canned sliced peaches, cut in pieces, ¼ cup brown sugar, firmly packed, 2 tablespoons flour, ¼ cup chopped nut meats, ½ teaspoon cinnamon, and 1 tablespoon butter.

Sift together flours, baking powder, and salt. Cut in shortening until fine as meal. Combine egg, honey, and milk. Add to dry ingredients and stir only until blended. Stir in raisins that have been dusted with 1 teaspoon of flour. Pour into greased 8-inch square pan. Push the pieces of fruit into dough. Sprinkle over top the topping made by mixing together remaining ingredients. Bake in hot oven, 400 degrees F., 30 minutes. Makes 16 slices.

Aurora, Nebr.

All-Bran Honey Nut Bread. Photo courtesy Kellogg Co.

From the Field of Experience

A PECULIAR SEASON

By Harry Lathrop

In all my experience of 62 years of beekeeping, this is the most peculiar season. I observed the first white clover blossom May 24th and up to July 9th not one bee was seen on any bloom of any sort, although there was abundance of white clover, sweet clover, both yellow and white, and alsike all along the highways. On July 9th bees were working on catnip, but none on clover. The only reason for this condition, so far as I can determine, is that we had an over plus of rain all through June. A basswood tree near our home is in full bloom and apparently very healthy, and not a bee has been observed on it. If such conditions obtain over wide areas, there will not be enough honey gathered to insure safe wintering.

Bridgeport, Wisconsin

(This was written July 14, 1944.—Ed.)

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SMOKER FUEL

By A. W. Burnham

With most beekeepers, rags are becoming a scarce item, for the last two very lean years have caused us to need all the old rags we could rake up to wear in the form of clothing. Likewise burlap has become very difficult to find and prohibitive to use on account of the price.

Nature provides one of the best fuels there is to be had just for the picking and that is none other than sumac heads. They make a very cool smoke, pleasing to smell and will absolutely keep the smoker clean. They are very convenient to carry out to the bee yard and once they are fired will burn slowly and last a long time. Being rather loose when they are put in the smoker, they do not readily go out because they do not choke out like burlap. There is a slight draft up through the heads all the time.

Just an hour's picking along a hillside road or on the side of a hill will provide an ample supply for next season. Any farmer will be glad to have some one pick them off.

Orrick, Mo.

[We have used sumac heads and they are quite satisfactory for smoker fuel. They should be picked in late summer and dried out for future use.—Editor.]

OBSERVATIONS OF AN AMATEUR BEEKEEPER

By C. O. A. Kramer

Some noted philosopher once said "If you wish to become much sought after, learn something about something that no one else knows much about." This sage advice seems to cover even the subject of bees.

It seems to be my failing that I will hold forth any and all times on the subject of bees. It is a subject that has fascinated me for many a year and now that I have learned something about something that no one else knows much about, I seem to have become the local oracle on bees. Folks that I have never even heard of call me on the phone to ask about keeping bees either on or out of their premises.

A neighbor about six squares away called me on the phone one day to ask what could be done about a swarm of bees that nestled under the roof beams of his English mansion, much to the discomfort of a colored couple who occupied a suite of rooms on the third floor adjacent to said swarm. It seems the little varmints came out at night by the dozens and flew sportively about the electric light bulbs. Upon examination I found that the walls between two of the uprights on the south side of the house contained the swarm. Not wishing to wreck a costly piece of decorating, I made a few small holes with an ice pick, used about a quarter of a can of Cyanogas between each upright, closed the holes with putty and opened the windows. Examination a day later disclosed the death of the miscreants and no further annoyance to the worthy colored couple.

Last fall another neighbor told me about "flying bugs" that seemed to come out in numerous places on a sort of covered driveway entrance which he called his "port cochere." He said that he had called in an exterminator the year before but that the bugs had come back the following year. Upon examination I found about six different swarms occupying the upper part between the roof and the beaded wood ceiling, as well as all six hollow posts supporting it. Inasmuch as the own-

er stated that he was going to have the "port cochere" removed later in the season, I advised him to have it done late in the fall. Later, when the carpenters came, we gassed the bees and, upon removing the lumber we secured about ten large washtubs of choice white honey.

Another of my neighbors residing in the same street called one day and complained about hundreds of bees disporting themselves right outside her kitchen window. I remembered the former occupant of the home, about eight years ago, stating that there was a swarm of bees in his attic, but that he considered it a lucky omen and wanted to keep them there. This new neighbor did not consider it so lucky and wanted them removed as quickly as possible. I found them entering and leaving from a couple of small openings where two sections of the roof joined to form a small ledge. I waited until almost dusk and then brought the Cyanogas into play. I then plugged all the openings with putty and that was the end of those bees and the annoyance to another fretful neighbor.

Then there was another chap from a neighboring village about four or five miles west of me who had read some of my little Observations in Gleanings from time to time. He wanted to buy a swarm of bees already at work in a hive. I sold him one which he hauled away in the trunk of his car. About a week later he called me on the phone to state that he thought his bees were swarming. I advised him that inasmuch as they were clustered on the limb of a low tree, to take a vacant hive body that I knew he had in the garage, fix it up for a home, and cut off the limb of the tree and shake the swarm in front of the new hive. This he did and reported later that all was serene in the new hive and that the swarm had evidently come from elsewhere and not from his recent purchase.

Another neighbor came over one evening to tell me about a bee that stung him repeatedly while he was trimming his barberry hedge. I went over to investigate, after telling him that once a bee stung you he was usually through with stinging again, and found a colony of paper wasps in the hedge that evidently resented the click of the clippers. Thus another libel on the poor little honeybee was squelched.

I think that the biggest laugh I ever got was when one of my feminine friends up at a Wisconsin lake took me to the rear of her summer home and, pointing out one of the biggest hornet's nests I ever saw, asked me in all seriousness, when and how she could get the honey out of that bee-hive as a surprise for her husband. She was very crestfallen when we tied some oily waste to the top of a long pole and scorched her "bee-hive."

I find most folks, however, very much interested in anything that you tell them about the bees, especially about the organization of the hive and their willingness to die, if need be, for the defense of the common home.

River Forest, Illinois

Note, Cyanogas should be used with extreme care as it is a deadly poison.

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ONE MAN'S OPINION

On Why Queens Sometimes Vanish

I saw something yesterday morning that shows how sometimes a puzzling event has a simple explanation. I had some time to kill and for no good reason began looking over one of the colonies, just to see what I could see.

Evidence of the queen's work showed that she was all right, at least average. She was not as prolific as I like to see them, but the season might have something to do with that.

Since I had time on my hands for once, I thought I would have a real good time, and go over the entire hive leisurely—something that seldom happens in these days of "hurry up and get on to the next job."

I was just lifting a frame from the hive when I noticed a funny looking bee hovering about a foot above the open hive. I says to myself, "That looks like a queen bee." But what would a strange queen be doing playing off by herself like that? In an experimental sort of way, I poked my finger in front of her nose. She lit on it as though it was all in the day's work to light on casual fingers that were thrust in her direction, and sure enough it was a queen—a fine big queen too, a layer, judging by the size of her belly, or abdomen, if you can't stand rough language.

While I was deciding that she must have come from the opened

hive, because no self-respecting queen would go off visiting another hive that way, she took off again and flew about three feet off to the right. That was too much effort, and she fell to the ground, and started to walk around under the grass. Very carefully I parted the grass blades and again offered my finger. "Thanks," says she, "that sure was some wilderness I was in down there."

"You get back where you belong," says I, "and cut out the monkey business."

I put her down on the frames, but instead of diving below as good queens should, she took off again and lit on my sleeve. I put her back on a frame, and this time she went down under. I closed up the hive, and later in the day took another peek. She was on the combs, quietly going about her business.

In one of his articles, Dr. Miller wrote that sometimes after going over every inch of a hive and the frames in it he would find the queen on his shoulder or other parts of his person. Also, on one other occasion, I had the same thing happen to me. I was looking for a queen with absolutely no luck, until my wife heard my grumbling and told me that the queen and her attendants were sitting on my shoulder.

I wonder how many lost queens get that way by this sort of thing. Maybe they get playful or scared and take to the air. Being sort of dumb, the lose their way and there is the making of another mysterious queen failure. If I had not seen this queen she surely would have been lost, and I would have blamed almost anything but what really happened.

The moral is to **keep your eyes on everything when working a hive.**

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SECOND GLANCES

By C. M. Isaacson

Extracting the crop is the season's climax (p. 353) and like all other parts of beekeeping needs an efficient system. Warren Munro's methods meet this requirement and show the result of planning. Several of his points should be kept in mind; well filled supers for thick honey, proper arrangement of apiaries for ease in loading supers, artificial heat for cold weather extracting, provision for heating the honey if necessary for proper straining as extracted—these and many more can be of value. The caution to use care when using Methyl Bromide as a fumigant is one which needs repetition.

The Nosema problem is coming into mention more and more (p. 356). One of the larger apiarists in my locality believes much more notice should be taken of it than in past years. As Mr. Gardner points out, when colonies winter and build up well—then weaken and fall behind in production (and Nosema is present) what is the cause, if **not** Nosema? Colonies reaching their peak too early? Perhaps. In my own apiary I have had several cases of Nosema, one colony hit heavily, **and** an abnormal loss of queens **doing good work.** Is there any connection?

Colony arrangement is important, both for ease of handling and for eliminating drifting and loss of mating virgins. Mr. Mraz's system does show advantages—but will it reduce drifting as compared to the two and two arrangement with pairs unequally spaced? This method also has many good points and a comparison of the two (in the same yard) would be of value (p. 357).

The food chamber hive in some form is becoming almost universal —even users of larger hives are leaving a super in addition to what the brood chamber contains (p. 358). Mr. Bohne's method works well with him and that is the main point. In similar localities others can doubtless benefit by his experience, but as the Editor points out different conditions are present further north. And only a single brood chamber would be rather small to raise the force of bees needed for our **short** flows of the past few years.

Vegetables and honey are an extra good combination (p. 360), Mrs. Nielsen's recipe for honeyed beets, for instance. We have tried it.

Selection of stock will give results (p. 362). The results we could obtain if all colonies were "as good as the best" should be ample proof of the need. The qualities we should and should not have in a good colony are well described by R. E. Newell. Keep them in mind.

Early supersedure of queens is our **most serious** problem the past few years, but I do not think One

Man's Opinion had the answer (p. 363). This spring I hived 40 2-lb. packages on combs of honey and pollen, and three and a half weeks later, quite a number had brood in eight frames. There was **much less** supersedure in this lot than another fed sugar syrup and built up much more slowly.

Essentials for successful beekeeping can be met in many ways. J. L. Byers' mention (p. 370) of his apiaries being wintered in double story, story and one half, or single brood chambers, and all equal in honey flow strength, show this. The determining factor as to the method of supplying essentials seems to be simply which will be the least labor.

Wintering bees successfully depends on **what** you winter more than **how**. This concensus of Mr. Hambleton's statement (p. 371) should be above every beekeeper's desk as winter approaches.

"Cure of robbing" (p. 373). It may work, but as the Editor says, it will take nerve to try it. And the queen bee detector likewise sounds "too good to be true."

Don't take chances on a fall honey flow—leave each colony **plenty** of the main honey crop. Then if a fall flow does come, it can be caught in a super. Mr. Deyell's advice here is very sound. (p. 374).

Middle River, Minnesota

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BETTER MANAGEMENT IMPROVES RETURNS FROM HONEYBEES

A tried and tested method of producing more honeybees, sorely needed now for pollination of wartime seed crops, is reported by Department of Agriculture entomologists in a new publication, "Productive Management of Honeybee Colonies." The method is basically better bee management. It results from many years of scientific experiment and field tests, and already is being used by some commercial beekeepers and farmers in making better use of their bees as well as to produce more honey and honey products at a lower cost.

Dr. C. L. [illegible]r, apiculturist of the Bureau of Entomology and Plant Quarantine, and author of the publication (Circular No. 702) says, "The trend in beekeeping practice during recent years has been toward operation of more hives of bees, with less attention to individual colony management and performance. As a consequence most commercial apiaries are reporting average yields approximately one-third those obtained from their maximum-producing colonies."

Dr. Farrar says "better management" includes such matters as year around management, more attention to individual colonies, and each colony at maximum production, a prolific queen; a productive strain, such as Italian, Caucasian, or Carniolan bees; an ample acreage of major honey producing plants not over two miles from the hives and ample hive space the year around with enough reserve honey and pollen to carry a colony through periods such as winter when plant life is dormant.

"More honeybees are urgently required to pollinate many seed crops," says Dr. P. N. Annand, chief of the Bureau. "Seed crop goals were not met in 1943. One reason for this is that there were only 3 per cent more bee colonies in the United States in September 1943, than there were in 1930, while the acreage of a large number of crops requiring the service of bees for pollination has greatly increased." There is a need for large increases of all legume seeds, particularly alsike seed and red clover seed, in order to increase production of livestock and livestock products for the war emergency. Red, alsike, and white Dutch clovers are self-sterile, depending on cross-pollination to produce seed. But the natural pollinating insects —bumblebees, solitary bees, flies, butterflies—are too few to insure profitable seed crops of alsike and red clover. For example, for red clover bloom there is an alarming scarcity of natural pollinating insects. Of more than 20 different kinds of insects pollinating red clover, honeybees are responsible for 75 to 85 per cent of such work. In addition the honeybee is needed to fertilize such important vegetables and fruits as onions, cabbages, radishes, carrots, vetch, buckwheat, turnips, peaches, pears, and plums.

Entomologists also point out that beeswax is needed for war uses. More than a million pounds of beeswax a year is required for use in war products such as: adhesive tape for sealing shells; waterproofing and protective coatings for shells, belts, coils, and machinery—particularly

for warm climates where ordinary grease cannot be used—and as protective coverings for fighting planes.

Department of Agriculture scientists give these reasons for the scarcity of natural pollinating insects now partly responsible for low seed crop yields: Growing plants in enormous acreages while destroying nesting places of wild bees, elimination of old rail fences, heavy grazing, forest, brush and grass fires, increased drainage of swamp lands, rotation of farm crops, and misuse of insecticides. The solution, they say, is more honeybees and better management of honeybee colonies, as outlined in the new Circular No. 702. A copy may be obtained from the Department of Agriculture, Washington 25, D. C.—U. S. Department of Agriculture, Agricultural Research Administration, Washington, D. C. (See also page 415.)

HONEY REPORT, JULY 1944

There were 5,219,000 colonies of bees on hand July 1, 1944 compared with 4,887,000 colonies on hand July 1 a year ago, an increase of about 7 percent. These estimates are based upon reports from 6,000 beekeepers to the United States Department of Agriculture. The reports indicate that colonies on July 1 were strong and in excellent condition for gathering a honey crop but that the nectar plants are in much poorer condition than last year due to dry hot weather. Judging from comments of reporters and the condition of nectar plants, yield per colony is expected to be below average.

Increase in number of colonies was general throughout the country. The South Atlantic and South Central areas showed the greatest increase with 13 and 10 percent respectively. Percentage increases in other areas were 6 in the East North Central area, 5 in the North Atlantic, 4 in the Western, and 3 in the West North Central area.

Of the total number of colonies on hand in early July, 21 percent was from new swarms compared with 19 percent from new swarms on July 1, 1943. Increases from new swarms ranged from 17 percent in the Western area to 30 percent in the West North Central area. New swarms are usually obtained from package bees, spring swarms or by divisions. The percentage increase from package bees was greatest in the North Central States and far exceeded the increase from spring swarms or division in this area. In the rest of the country increases were made mainly from spring swarms or by division with increases from packages playing the minor role.

The loss of colonies of bees during the winter and early spring (1943-44) was about 14 percent,compared with a loss of 21 percent last year. As was the case last year, starvation was the principal cause of loss, followed by poor or missing queens and the usual minor causes such as disease, exposure, and pests. The winter loss was greatest in the West North Central States where 22 per cent of the colonies perished.

The condition of colonies early in July was uniformly good. The reported condition was 87 percent of normal compared with 85 percent last year. Spring weather was cold and wet generally throughout the country and the spring build-up of colonies was slow. In early July the colonies were strong and populous but many sections of the country were extremely dry, which has lowered the condition of nectar plants and reduced the chances for a good fall flow. In drought areas the colonies which are strong and have a large number of worker bees will be a liability because they will probably consume more stores than they are able to bring in.

Condition of nectar plants in early July was reported at 76 percent of normal, which compares with 84 percent a year ago. All areas showed a marked reduction in the condition of nectar plants compared with a year ago with the exception of the South Atlantic area where the condition is the same as a year ago. Decreases range from 7 percent in the Western States to 14 percent in the East North Central States. The heat and dryness that enveloped much of the country following the late wet spring will tend to shorten the honey season and hold down yields. Honey production in the South Atlantic and South Central States, where the bulk of the crop is made by July 1, has been fairly good.—U.S.Dept. of Agri., Bureau of Agri. Economics, Washington, D. C.

Asked and Answered

Upper Entrances to Reduce Labor of Bees

Question.—Would I get more honey from a hive by boring an entrance hole in each super so that returning bees would not have to work all the way up through a hive body, queen excluder, and several supers before unloading? A small landing could be fastened below this hole, and, if necessary, bars could be placed at the correct distance apart over the hole to act as an excluder.—Arthur V. Baldwin, Pa.

Answer.—If you wish to have an upper entrance above the queen excluder, simply shove one of the supers back one quarter inch, which will make an opening directly above the rabbet. You will find there will be no opening at the opposite end of the hive if you do not push the super back more than one quarter inch. This plan would obviate the necessity of boring a hole in each super. You will find, however, that bees may be slow to use such an opening, especially if they have become accustomed to using the bottom entrance. In time, however, some of the bees will use the upper entrance. This plan, we feel, does save some time on the part of the bees in getting the honey stored in the supers because they do not have to pass through the main entrance, then up through the queen excluder into the supers. If, however, section comb honey is being produced, the sections are not likely to be well capped over near the upper opening. Furthermore, the bees using the super entrance may deposit more pollen in supers than they would if only the lower entrances were used.

Fumigating Extracting Supers Against the Bee Moth

Question.—I would like some information in regard to the care of supers of extracting combs after the crop has been extracted. If supers are put back on the hives to keep out the moths it is likely that some honey may be spread in several of the combs in all of the supers. This would require the labor of examining every comb again and extracting the honey, and also this work must be done late in September or in October after the danger of moth damage is over; also it is difficult to get the bees out at that time. We wish to store two thirds of these supers and fumigate them if necessary. We do like to have them cleaned up by the bees on the hives so they will be dry before storing.—Edward Hassinger, Jr., Wisconsin.

Answer.—Here in Medina we do not have the combs cleaned up by the bees before the supers are stored in winter quarters. We stack the combs away, mouse proof, even though they are wet. Theoretically, it is preferable to have combs dry when they are stored away in the fall. This necessitates putting them on the hives, then taking them off again. This means more labor and this is one item we must reduce, if possible. Some stack supers over the inner covers with the blocks removed so the bees may circulate through the supers. If there is a light flow on, the bees may put some nectar into the empty combs of the supers above the inner covers. We pile the combs away about eight high, bee and mouse proof. We aim to give each stack of supers a shot of carbon bisulphide. Twelve days after the first application we give the combs another application. This second shot destroys larvae developed from eggs. Carbon bisulphide does not kill moth eggs. Some 25 years ago the writer stacked about 100 supers of wet combs outside, in piles eight high, a short distance from a commercial apiary, to be cleaned up before being fumigated. The bees cleaned them, but they also destroyed some virgin combs.

Putting Swarm Back After Killing Laying Queen

Question.—Next spring when my bees go to swarming, I want to trap the queen when the swarm settles, then kill her so the workers will go back to their hive and start working when I need them the most. What is the best way to do this.—J. T. Allison, Texas.

Answer.—It would be possible to dump the swarm in front of the hive from which it issued, using an entrance guard or a queen trap to catch the queen after the worker bees had passed through. If you would dispose of the queen and remove all but one ripe queen cell and raise some of the combs of brood out of the brood chamber into the super above to relieve congestion, you would then be able to keep all of the bees in the colony together and thus secure a larger crop of honey. The bees would eventually rear another queen from the cell left in the brood chamber under normal conditions. You could also unite the swarm back with the parent colony by dumping it into an empty hive body above a queen excluder and smoking the bees down.

From North, East, West and South

NORTHERN CALIFORNIA, Aug. 4

Weather: This evening's paper states: "Last month was Oakland's coldest July since records were started and strangely enough the lowest and highest temperatures of the month were recorded on the same day, July 2." This is a fair sample of reports on the weather coming from beekeepers in various sections of the state. We think the report is somewhat exaggerated.

Condition of Bees: From our various reports of the condition of bees we have to conclude that they are in fair condition over the entire territory. We have had some terrific grass fires in which some bees have been destroyed. Earlier in the season some bees were lost in floods. This far in the season we have little complaint of loss of bees from the dusting of poisonous insecticides. Ever since tomato growers commenced the use of the airplane for dusting poisonous insecticides on their crops we have had heavy losses of bees. A move has been started that should bring good results. It is along the line of education and cooperation.

Miscellaneous: Since both tomato growers and beekeepers are engaged in the production of foodstuffs and commodities vital in the war effort, and since each of these industries should recognize the problems of the other, it continues to be recommended by the Committee that each should be tolerant in any of their actions which might interfere with the operations of those engaged in the enterprises chiefly concerned.

Alameda and Contra Costa County beekeepers are cooperating on the question of dusting of poisonous insecticides. They have found the Farm Bureau can benefit them. The Farm Bureau wants to know more about the beekeeping industry. This study of the question is proving valuable to both beekeepers and tomato growers. They are getting interested in each other's problems. They both believe that education and cooperation with plenty of stick-to-itiveness will do the work.—Cary W. Hartman, Oakland, Calif.

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SOUTHERN CALIFORNIA, Aug. 2

Weather: Today finds Southern California weather more or less a continuation of May, June, and July. A few days might be called warm in the Imperial and Palo Verde Valleys but nearer the coast cool foggy nights continued, with high fog or misty clouds reaching inland often until noon or after. This makes for a most delightful weather condition but has not proven conducive to nectar secretion.

Honey Crop: Wild buckwheat bloomed but failed to furnish much nectar. Beekeepers who make a practice of weighing each colony say, "Some colonies show a gain of one half pound to one pound per day while others show a loss." At best the crop is certain to be a disappointment. Reports from the Imperial Valley are more encouraging and beekeepers will probably get a case per colony down there.

Market: By far the larger part of the '44 honey has been sold or bargained for. Only a few small lots remain in the hands of the beekeepers.

Miscellaneous: Most of the larger operators inspect colonies several times during the season. Most apiaries will make enough honey to get a fill up for winter. Now is a good time to get all set for 1945.

The growing of such seed as carrot, beet, and other vegetables has encouraged beekeepers to move bees to any locality where the acreage might be sufficient to give a supply of nectar.

We heard one of our large operators make a statement something like this: "I always like to winter in two-story hives. In a one-story colony, while the bees might winter all right, there is not sufficient room for both honey and pollen to build a colony up to strength for the

orange honey flow." It is the big husky colonies that get the early honey and maybe pollen has more to do with it than many of us think. —L. L. Andrews, Corona, Calif.

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TENNESSEE, July 31, 1944

Weather and Conditions: Our bee-year opened slowly but surely down this way. Elms and maples were ready with their stimulation in early March. Bees could have worked pine honeydew all during February but few were lured astray. April was a perfect bee-step into the honey month of May, but colonies were only halfway prepared. Half of them went into winter last year very light in stores and the worker force available could not take advantage of the favorable conditions for good build-ups. May was perfect for a honey flow (we must have a perfect May in order to count our bee year good). The bee buccaneers brought in all the plunder they could. Butterweed, white clover, hop clover, blackberry, and poplar, yielded well.

Early July brought rain and hopes for some sourwood. Pine honeydew came into the picture again and is mixed with what sourwood the bees gathered. The average yield to date of all honey per hive is just over 40 pounds.

One Caucasian colony of mine, just a story and a half affair when April came along, has yielded 195 pounds to date. That is something for Tennessee! I have also made one increase from this hive and it has superseded the old queen somewhere along the way.

Our new State Apiarist, Mr. George H. Rea certainly got busy when he got inside the state. He's been all over since coming down from Memphis to Greenville. He's to be with our state's oldest active beekeepers' association at Greenville (Green County) on August 4th to meet the beekeepers there. Just give us time and we'll be beekeeping right down in Tennessee.—Carl M. Teasley, Apison, Tennessee.

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PENNSYLVANIA, Aug. 8

Weather: In the buckwheat section of the state the honey flow is getting under way. Expectations are for a good crop. We have had sufficient rains in most areas for good growing weather. Then, too, more buckwheat was planted this year than usual. Many farmers who got a short crop of oats last year have planted more buckwheat this year.

Miscellaneous: The clover area of the state is in the off season at present. Colony strength remains good and with favorable weather a fall crop of aster and goldenrod honey is anticipated.

Being new to Pennsylvania I may not know what can be considered a good year but I would say that there are only one or two localities which I have visited that would be considered poor. At least it is the best since 1941 and with a good fall flow might be better than last year in some areas.—John M. Amos, State College, Pa.

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SASKATCHEWAN, Aug. 8

Weather: The weather in Saskatchewan during the spring and summer was favorable for bees, and colonies throughout the province built up in excellent shape before the main honey flow commenced. The season generally was two weeks ahead of average and on the first of July it looked as though we would have a bumper honey crop over the entire province. However, dry weather during July in the southern half of the province seriously curtailed the honey prospects there. The north of the province, where most of the honey is produced, received ample rain and excellent yields are being harvested.

Miscellaneous: Many of our producers experienced excessive queen losses in packages this spring, some running as high as 40 and 45%. The losses this year were all from packages shipped from one state, indicating to us that weather conditions in that state had something to do with the condition of bees at time of shipment. Other years we have had difficulty with other states, so that it is hard to determine just where the trouble may lie. However, we do have one or two shippers who seem to have very little queen loss year in and year out and their bees may have some resistance to the conditions causing loss in other bees. A number of the queens superseded have been examined and have been

found infected with Nosema disease. However, we are not at all sure that all this loss is being caused by Nosema. It certainly indicates that we still have a lot to learn about the shipping and care of package bees to reduce such losses as this, which occur every three or four years. —R. M. Pugh, Provincial Apiarist, Fort Qu'Appelle, Sask.

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UTAH, Aug. 7

Weather: A late cold spring, extending far into the summer, has spoiled our chances for a large honey crop. First crop alfalfa was cut in most sections before the weather permitted honey gathering and the second crop is just now beginning to produce. The nights have been too cool to suit many beekeepers in the northern part of the state and the winds seem to be unfavorable nearly everywhere.

Crop: Some producers in the Uintah Basin have already averaged a can per colony, gathered mainly from white sweet clover. Those in other sections of the state whose income depends on the alfalfa bloom, are hoping that August will bring them the honey they failed to get in July. Other factors besides the weather which will determine the difference between a colony average of 40 or 60 pounds in Utah are: the thrip which seems to be beating the bees to the nectar in some parts of central Utah, the weevil which is injuring alfalfa in other central and southern counties, and arsenic poisoning which is again killing bees in Weber, Davis, Salt Lake and Utah counties.

Miscellaneous: Delta producers, most of whom got very little honey in the California orange orchards, have been feeding sugar since they moved to their summer alfalfa locations. Only the strongest colonies have been able to maintain themselves through July. If second crop seed alfalfa fails to secrete nectar in August and September the Delta men will have wasted almost a year's inter-state trucking, building up "nucs" and feeding bees.—William L. Moran, Salt Lake City, Utah.

TEXAS, Aug. 1

Weather and Conditions: This month saw the end of the first half of the 1944 activities of the honeybee. Many years ago it was called to the attention of the students of ecology that as one goes from north to south in the Northern Hemisphere the least number of frostless days marks the northern limit of bee activities. The point where bees can collect nectar the greatest number of consecutive hours per day per season is the point of the bees' greatest productivity. The point where high temperatures in mid-summer prohibit the collection of nectar marks the beginning of the two-season year, and that point where long summer heat makes nectar gathering impossible sees the beginning of the winter active zone of nectar active insects. This zone extends south and is the connecting link to the counterpart zones in the Southern Hemisphere. The weather combinations in 1944 show beautifully the spring season.

The year up to March 30th was ahead of normal. The bees had ample stores. Spring annuals, Mexican persimmons and mesquite were yielding more than the average for the time. On March 30th came a heavy frost that put the honey plants back into winter condition and the bees on the stored food. This equalized conditions better than man could have done. Thus from almost mid-winter condition the bees had to raise brood and to be ready for the regular honey flow which began April 3rd. The flow was good and lasted six weeks. The bees stored a normal crop, which curtailed brood rearing. By the middle of June egg laying was at an end due to the bees filling the vacant cells with nectar from a failing honey flow. By June 25th the only brood to be seen were those few cells with almost grown larvae unsealed because of the lack of nurse bees and new wax. This summer quiescent period will last until about August 10th when egg laying will begin and the second or fall honey flow will start September 10. It is never like the vernal honey flow but it is its coun-

terpart and ends about November 20th with the coming of the first killing frost.

Crop: The honey crop for 1944 will be near 45 pounds per colony including of course all classes of beekeeping. The quality is good as a whole, classified as a natural blend. Beekeeping is on the upward trend, not only because honey is in demand but also because more bees are needed for home use and to supply the out of state market for colonies, package bees, and queens.—H. B. Parks, San Antonio, Texas.

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ONTARIO, Aug. 8

Crop Conditions: At this date the white honey crop for Ontario is all stored with the possible exception of some surplus from second crop alfalfa in a few districts. Reports of crops are very uneven with good crops in one section changing into a poor crop area with only 10 or 15 miles separating the two locations. We have a crop a bit below the average locally, with good crops not more than 20 miles away from our extracting plant, with a good yield also some 50 miles away.

Many years ago when we decided on beekeeping as our life work, we came to the conclusion that the only way to make a living or better, was to have our bees scattered. Our home district is none too reliable as a honey producing area as the farming is too intensive with bulk of farmers producing milk for the Toronto trade. There is very little permanent pasture, because every year less alsike and other clovers are grown for seed. Our policy of having the bees over different sections was adversely criticized by some, but after all these years we are convinced that we made the best decision.

One year I remember that we averaged 200 pounds per colony with our bees that are the farthest from our home while locally we had a near failure. This year the crop is light where we had the big yield referred too, while apiaries 50 miles away in another direction have given us a fine yield. Rarely is the crop good in all sections of the country in the same year, and rarely is there a failure in all parts. Yes, it means more overhead, more time on the road, and other features too numerous to mention that might be summed up against the policy of having the apiaries scattered. But the advantages in avoiding failures in the honey crop have more than compensated us for the extra work and expense of management. This year again, swarming had been a minor problem hardly worth mentioning and although we operate about 30 apiaries widely scattered, the loss of absconding swarms would not average over two to each apiary. And at least half of that small loss happened after the major part of the white honey was on the hives, swarming being caused mainly by supersedure

Miscellaneous: Locally, as well as in Victoria county, we have had many heavy rains and 1945 bids fair to be a great clover year, as it is present in great profusion. In mid-August pastures are generally brown and seared, but this year the grass is now as green as it was in June. Eastern Ontario and much of Quebec have not shared in this heavy precipitation, and latest reports inform me that it is still dry in those parts of the country.

The only change made to date in the rationing of honey is that comb honey sections are not now rationed. So little comb honey is produced that the rationing of this product was looked upon as a joke by most beekeepers. While local sales are not one quarter of what they were in 1943, yet it is surprising how some families saved their coupons and bought less sugar, so that they would have coupons for honey. Sales of 50 pounds to one family is common while a few buy 150 pounds. While the rationing of honey is a nuisance in many ways, we must confess that the awful rush of a year ago when as much as 13,000 pounds left our plant in one day, is not possible to happen again this year.

Buckwheat acreage is very small this year in most localities where we have bees, but our apiaries in Victoria County are now all storing from this source as there the acreage is about the same as in other years. So far we have avoided getting any buckwheat mixed with clover.—J. L. Byer, Markham, Ontario.

American Honey Institute News Notes

By Harriett M. Grace, Director

Foreign firms are already exploring the possibility of importing honey from the United States after the war.

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Civilian consumption of honey must be increased to fill the gap caused by decreases in the war consumption. There is no better way to do this than to put a copy of "Old Favorite Honey Recipes" in every home. The book is being revised and enlarged. Why not plan to send a copy to customers and friends for a holiday greeting?

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A recent survey in a plant shows that men prefer cake to cookies in their lunch boxes—that a ham sandwich (we hope it's a honey baked ham) rates first and peanut butter second.

A sandwich filling used by many consists of peanut butter and honey with a cake of compressed yeast added to enough filling for six sandwiches.

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The paper situation is serious. There is great need to conserve and salvage paper.

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Military and lend-lease requirements will be high this year so it will be well to have plenty of home-canned foods on hand.

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Crisco's latest recipe book gives honey much prominence.

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The Institute was asked to suggest honey specialties that the boys in the Army might like, and to furnish recipes for the same.

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While the Director was attending the meetings of Home Economics Women in Business and the American Home Economics Association in Chicago, her news release on honey was appearing in newspapers throughout the country.

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A representative of an allied food industry, with offices in New York, telephoned from Chicago for copies of "Old Favorite Honey Recipes." Along with these books, a copy of the little blue book, "Honey Recipes —for Sweets, for Energy, for Conservation," was sent. He liked the blue book so well that he asked for 25,000 copies for an exclusive food store in New York to distribute.

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Many letters from beekeepers in foreign lands come to the Institute. Letters received today were from Dundee, Scotland; London; and North Sydney.

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A nationally known bread firm is planning a tie-up with honey. The Institute has been asked for 50,000 window streamers featuring bread and honey. The title of a song might appropriately be, "I'll Spread my Bread with Honey."

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You would be amazed at the number of letters we receive from persons in the Armed Services who are interested in honey.

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At a State Grange Lecturer's Conference in New York State, a number heard of "Old Favorite Honey Recipes" and have written for the book.

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An extract from a letter from one of the leading dietitians in the country follows: "May I thank you for the very fine package which I got from our office this past week. I appreciate getting the booklets and will certainly include these new copies in my Red Cross Travel Kit and refer to them as a way to extend the sugar supply through canning season and throughout the year."

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Honey is a weapon in this battle for victory.

Good luck and an abundant harvest.

Honey Chocolate Syrup

Three squares chocolate or ½ cup cocoa, 1 cup honey, ½ cup water, ¼ teaspoon salt, and 1 teaspoon vanilla.

Melt chocolate over hot but not boiling water. Combine with honey, water and salt. Simmer, stirring constantly for 2 minutes. Then boil one minute. Cool, add vanilla and stir to blend. Keep in covered jar until ready to use. Store in refrigerator or other cool place. Amount used will depend upon how sweet and flavored you prefer your chocolate milk.—Mrs. Benj. Nielsen, Aurora, Nebr.

Just News

The Middlesex County Beekeepers' Association will hold its last outdoor gathering for this year at Mr. and Mrs. Allister F. MacDougall's orchard and apiary in Westford, Massachusetts, on Saturday, Sept. 30 at 2 p. m. Apples will be ripe, and Mr. Russell is growing his delicious sweet corn for the occasion. Bring your picnic supper and eating hardware.—A. M. Southwick.

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Walter F. Straub has recently resigned as director of the Food Rationing Division of O.P.A. His successor is Ivan Burdick. Mr. Straub will resume his former work in connection with his business in Chicago. However, he will be available as a consultant for the F. R. D.

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Circular No. 702 entitled, **"Productive Management of Honeybee Colonies in the Northern States,"** issued July, 1944, by U. S. Department of Agriculture, and written by C. L. Farrar, Apiculturist, Division of Bee Culture, Madison, Wisc., is now available and for sale by Superintendent of Documents, Government Printing Office, Washington, D. C., at 10c per copy. It covers the new doctrine of wintering, pollen reserves, and breeding from select stock tested for high honey production. It sets forth the new era of beekeeping which we believe will reduce winter losses and secure a higher per colony average of honey and wax. We hope our readers may secure copies.

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The regular monthly meeting of the **Bronx County Beekeepers' Association** will be held on Sunday, September 10th, at the home and apiary of Mr. Frank Mesek, 2219 Dereimer Ave., Bronx. All interested in beekeeping are welcome and an opportunity will be given to present questions on bee matters. Top entrance, and winter covering will be matters for discussion. Refreshments will be served.—Harry Newman, Secretary.

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The New Rochelle Beekeepers' Association will hold its regular monthly meeting at the Dorchester Apiaries, the estate and home of Mr. and Mrs. George H. Sallaway, Dorchester Road, Scarsdale, N. Y., on Sunday, Sept. 17th at 2:30 p. m. A question box will be featured followed by a general discussion.—S. Barnes, Publicity.

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The Southern States Beekeepers' Federation will meet in Greensboro, North Carolina, October 25-26, with headquarters at the O'Henry Hotel.

SUMMER MEETINGS

(Continued from page 399)

Reese, State Apiarist of Ohio, who urged that the producers use care in processing honey to be marketed. R. H. Kelty, of Michigan Agricultural College, advised the feeding of sugar syrup when necessary to stimulate brood rearing early enough in spring to secure adequate bee population in time for the honey flow. **R. F. Remer,** of Sioux City, Iowa, explained the work of the American Honey Institute and the benefit to the industry of a national organization.

Don Barrett, Michigan State Apiarist, mentioned the war time handicaps affecting the Inspection Service and asked beekeepers to be on the alert for disease. **Jay Cowing** of Jenison, Michigan, pointed out that poor quality imported honey placed in one-pound jars was in danger of spoiling the consumers' taste for honey. He also spoke of the lack of care used in shipping imported honey into Michigan in wooden kegs that were too light to stand the trip. The resulting loss of honey along the way needlessly exposed Michigan bees to disease.

Ed Sheldon, of Byron, Michigan, explained his special tunnel for use on top of the inner cover hole going to the front of the hive, serving as a top entrance. He explained since using this top entrance that his bees have wintered better because the combs were always dry and also that there was no loss of pollen due to mold.

Clarence Bowlander, of the Michigan State Department of Agriculture, spoke of the work done by the Michigan State Laboratory and the use of agricultural products in new form developed by the Laboratory. Some of this development gives promise of larger bee pastures to come.

Editorials

Alfalfa—A Life Saver During comparatively recent years, alfalfa has made a steady march from the West to the East and up to now was found in most of the middle western states. Some years ago, it was said that alfalfa did not yield nectar east of the Mississippi River except in one restricted region somewhere in New York State. During recent years, alfalfa has yielded quite well east of the Mississippi, especially during dry seasons. This year during the extremely hot dry weather, it has been a life saver in some of the clover regions where other clovers did not give a normal crop.

The flow is not rapid but it is steady. It is a tapering-off flow that permits bees to fill their food chambers solidly for winter. That is what counts for good wintering.

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American Honey Institute Since the inception of this organization in 1928, it has been continually educating people to the use of honey. Space does not permit enumerating the different channels through which the Institute works. Mrs. Harriett M. Grace, Director of the Institute Office, is making many valuable contacts throughout the nation in the interest of honey. The recipe book, "Old Favorite Honey Recipes," which first appeared in 1941 is now in the sixth edition and more than a quarter of a million copies will have been printed.

While honey is in demand at present due to the shortage of sugar, the day may come when this demand may slacken somewhat. Honey prices may not continue as they are at present. We will then need the American Honey Institute more than ever before. Let's continue to give it our moral and financial support.

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Accessory Upper Winter Entrance The use of accessory top or upper entrance to provide means for escape of excess moisture from a cluster of bees wintered outdoors is not a new idea. It was used and recommended by Langstroth about 90 years ago. Had he lived longer to exploit it, its use might have been universal today.

It was approved by Dr. C. C. Miller years later (1913); used by J. E. Crane, Arthur C. Miller, F. Dunbar Todd, and by numerous others of the pioneer beekeepers 30 and 40 years ago. In Europe the upper entrance was as common as today. But it has been only in the last few years that its merits have appeared in the bee journals of America.

Why was it not adopted in the days following Langstroth and C. C. Miller? Probably because no one could or did see at the time that excess moisture surrounding a winter cluster of bees was one of the primary causes of bad wintering, in spite of packing. It was argued that if there was enough packing there would not be condensation on the inner sides of the hive. True, in part, but a cluster of bees when it consumes honey will give off moisture.

Perhaps the feature of the upper entrance that commends itself to many is that it will not, like the bottom entrance, become clogged with snow and ice and dead bees, resulting in suffocation.

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Abnormal Supersedure of Queens in Packages There has been a good deal of speculation as to the cause of early or abnormal supersedure of queens shipped with package bees. Just why some queens will do good work for two seasons, while other queens are superseded early during the first season is not known.

It has been said and thought that home-grown queens, and by that is meant queens that have been reared in nuclei, or full colonies from either supersedure or swarming cells, are preferable to queens that are reared commercially by the grafting method

An experiment conducted by Erdman Braun, Assistant to Superintendent, Apiculture, Dominion Experimental Farm, Brandon, Manitoba, presented on page 8 of the December, 1943, Western Canada Beekeeper, reveals some interesting facts. The work covers three seasons' experimentation, from 1936-1938.

The results of the experiment appear to indicate that a larger percentage of home-reared queens were superseded than Southern-bred queens, shipped in. This would indicate that caging, shipping, and in-

troduction methods of Southern-bred queens in not as vital a factor in supersedure as presupposed by many purchasers of bees and queens.

A study of wintered-over, home-reared queens, as compared with queens received from the South, showed as high or higher percentage of supersedure for the former group. The only difference was that in the wintered-over colonies, the supersedure rarely interfered with colony morale or production, whereas in package colonies, supersedure, if it occured shortly after installation of the packages, would frequently cause the production factor of the unit to be reduced to practically nothing.

It seems that various methods of releasing queens in the packages were used, which apparently made no difference as to supersedure.

We hope that further work may be done along this line to determine the real cause of abnormal supersedure and how it may be reduced.

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Beekeeping in the Limelight Since the issuance of bulletin E-584 entitled, "The Dependence of Agriculture on the Beekeeping Industry," put out by the United States Department of Agriculture, in December, 1942, a copy of which should be in the hands of every beekeeper, considerable attention has been focused on our industry. A number of articles dealing with beekeeping have appeared recently in national journals with wide circulations.

In the August, 1944, issue of **Successful Farming,** is an article, "Grass-Seed Fortunes for the Harvesting" which shows how honeybees can step up seed production when hives are located within flying distance of legume fields during blossoming time. The writer stresses the present shortage of clover seeds and quotes John W. Nickolson, Chairman of Seed Task Force, as saying, "The prospective shortage of seed could result in a national disaster."

Russia wanted 20,000,000 pounds of alfalfa seed this year and Great Britain 7,000,000 pounds of red clover seed, but neither got a pound. The article goes on to say, "A shipload of seed will grow more meat and milk for our Allies than we could send them in a whole convoy."

Another article entitled, "Fortune on the Wing," by Frank J. Taylor in the August 12, 1944, **Saturday Evening Post** is full of interest and colorfully illustrated. It shows what can be accomplished in the production of honey, wax, and bees. This is bound to create a great deal of interest in bees and honey. The **Post** is to be commended for publishing such a fine article.

Obviously, the beekeeping industry, which as yet is in its infancy, is an important and essential branch of agriculture and has a bright future.

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Drouth and Its Effect on the Honey Crop While on a recent trip attending bee meetings, we found the drouth most acute in Indiana and Ohio, extending northward through central Michigan. A fairly good crop has been secured in northern Michigan.

The drouth was markedly less as we moved westward until we reached Wisconsin and Minnesota where all farm crops looked fine. (Late reports show that the drouth has hit these states also.)

In North Dakota the conditions appear to be better than last year. The weevil is less in evidence.

Sweet clover and alfalfa were conspicuous by their absence. Fields of either were miles apart and in their place were common red clover and soybeans. There may be some honey from red clover and alfalfa where the land is dry.

Soybean fields were everywhere present. One could see that the plants were green and vigorous, drouth or no drouth.

Sweet clover and alfalfa, will they come back? Yes, say agronomists and county agents, because the soybean robs the soil. It is a hunger crop. Some say three years of continuous planting of it will ruin farm land for any crop and the only remedy and only hope is planting sweet clover, which if given time will restore the fertility of the land. This should be followed up with alfalfa.

Sweet clover and alfalfa, why have they disappeared? Some farmers claim they do not like sweet clover and so they are planting red clover. Blight in Wisconsin has hit alfalfa and the weevil has hit sweet clover. Now farmers are asking for sweet clover and alfalfa seed to plant. The price of both will be high enough to encourage seed production.

Talks to Beekeepers

By M. J. Deyell

September Apiary Management

This is one of the most glorious months of the year, especially in the North. However, it may have a tinge of sadness, perhaps because the days are shortening, trees are beginning to color, the bee season is drawing to a close, and winter is on the way, around the corner.

For some of us, the season has not come up to expectations. Others have secured some surplus honey. I have learned, for this location at least, that one never knows what the crop will be until early October. We usually have a goldenrod and aster flow during September and early October. Last year this fall flow did not materialize in September because of cool weather. The weather turned quite hot on October 2 and for twelve days, during this "summer" weather, bees piled up some surplus. It is unusual, however, to have such a late honey flow in this area. I remember putting on supers on October 10 and they were actually needed. And so, those of you who are located in goldenrod and aster areas should be ready for a flow when it comes.

During the cool nights of September, bees are not likely to store much honey in supers unless there is a heavy honey flow on. During a slow honey flow, the brood chambers and food chambers are likely to be well stocked with honey and that is as it should be.

Replace Old Queens

During the last examination of brood chambers this month, old or worthless queens, if found, should be removed and replaced with young laying queens. As a rule, queens are more easily introduced late in the season than earlier.

Food Chambers Should be Full

As mentioned previously, it is well to have all of the combs in the food chamber well filled with honey, together with some honey in the lower chamber. A populous colony of bees that has plenty of good honey in the combs directly above the cluster is not likely to starve during the winter and early spring. During very cold spells of winter, the cluster can move up but may not move sidewise. The essential requirements for successful wintering were mentioned in the previous talk.

A few days ago, I was asked to appear on a program of a bee meeting here in Ohio and I selected for my topic, "Did You Ever?" It was suggested that some of the points brought out in the talk be mentioned in Gleanings, so here goes:

(1) Did you ever over-estimate the honey crop? Most of us have been guilty of this. Sometimes the honey flow is so fast and furious at the beginning of the season that we are tempted to estimate the amount of surplus we are going to secure and usually our estimate is too high especially when the honey flow shuts off abruptly due to unfavorable weather. The best time to make an authentic statement concerning the size of the crop is after it is in the cans. Even then, in some instances, beekeepers may not have left enough honey with the bees for winter stores and in reality, it would be preferable to have somewhat less honey in the cans and more on the hives with the bees to insure successful wintering.

(2) Did you ever get bees started to rob through carelessness or faulty hive manipulation? Most of us have been guilty of this error. Bees should be handled only when they are carrying nectar and pollen freely. Occasionally, a honey flow will shut off rather suddenly when the wind comes out of the North. Hives should be closed up. It is easier to prevent robbing than it is to stop it when started.

In operating commercial apiaries, it sometimes seems necessary to manipulate hives under unfavorable conditions to carry out a schedule. Shippers of package bees in the South are sometimes compelled to shake bees into packages on cool days to avoid delay in shipping. We have done that very thing here at Medina frequently. Those who do the shaking must be protected by armor plate to avoid being stung. Incidentally, if some of the northern beekeepers who receive packages of bees in the spring could visit some of the southern shippers to see what they actually have to go through in order to fill the package

orders on schedule, these northerners would likely appreciate, more than ever before, the labor and inconveniences involved in producing and shipping bees and queens.

For back lot beekeepers in towns and cities, let me say that if bees were handled properly at the right time of the day or season, there would be fewer people stung and fewer disgruntled neighbors. This is a serious problem and something must be done about it.

(3) Did you ever let honey run over on the floor? I have, more than once. Some of us during the busy season, when help is scarce, try to do more than one thing at one time. When drawing off honey from a tank into cans, it is necessary to concentrate on the job. A few years ago we had a helper who stated very emphatically that he would never run honey over on the floor. He had scarcely gotten the words out of his mouth when the honey in the can he was filling overflowed onto the floor. Was his face red?

(4) Did you ever fall into a large tank of honey? I never did, but I have it on good authority that a certain beekeeper in an eastern state did. He was balanced on the edge of a large tank almost filled with honey, adjusting the strainer. He lost his balance and fell into the honey head first. I should like to have been there with a movie camera when he crawled out.

(5) Did you ever have honey robbed out of supers above a bee escape? It certainly pays to examine carefully all supers placed above bee escapes to see that no small openings, wide enough to admit bees, occur. Of course, the honey, if robbed out by bees in the same apiary, is still in the yard, but it is maddening to find a few supers with combs empty of honey when they are removed for extraction.

(6) Did you ever get stung on the inside of the nose? On one occasion, I got stung twice on that part of my anatomy and I was almost put out of business for the day. It pays to have one's bee veil adjusted properly and positively bee tight.

(7) Did you ever divide colonies too late in the season and lose them during the next winter? I have. A number of years ago, a nearby beekeeper with a very populous colony divided it into five parts giving each new division a young laying queen during August. Of course, he lost all of the bees during the winter. If he had divided the strong colony into two parts during early August and had given both divisions expert management, he might have carried them through the winter, but we do not advise dividing colonies late in the season as it rarely, if ever, pays.

It sometimes pays, however, to divide very populous two or three story colonies in the spring at the beginning of the fruit bloom and dandelion honey flow, giving the new division a young laying queen. Even this procedure is not to be advocated if the major honey flow is of short duration as in some alsike and Dutch clover regions. In the sweet clover and alfalfa regions, where the honey flow is long drawn out, such division of strong colonies can sometimes be made profitable.

In the Red River Valley, some commercial beekeepers divide strong colonies in the spring, giving the new divisions young queens, then unite the colonies after the surplus honey is removed some time during September, doing away with the old queens and retaining the young queens. A well filled deep super of honey is retained for each united colony, in addition to what honey there may be in the brood chambers. This means three-story wintering. This does actually work out quite well. A large united colony with a strong force of bees with adequate protection is likely to winter well. Furthermore, this large colony will consume proportionately less honey during the winter and early spring than would the two colonies if wintered separately.

In the spring these enormous three-story colonies do need attention quite early in the season and while they are being manipulated at the beginning of the dandelion honey flow it is an easy matter to divide the brood, bees, and honey, giving the new division a young laying queen. Such dividing should be done very judiciously and as already stated, this method of management should be tried only in regions that give a long drawn out honey flow such as usually occurs in sweet clover and alfalfa regions.

(8) Did you ever assume colonies had ample stores for winter and then have them starve before spring? I have, more than

(Continued on page 427)

Buy and Sell Here

.CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 8 cts. per counted word, as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

FOR SALE—50 60-lb. tin amber clover, $12.00 can; 50 60-lb. tin California eucalyptus, $12.00 can; 50 60-lb. tin California avocado, $12.00 can; 50 60-lb. tin amber goldenrod, $10.80 can; 100 60-lb tin dark Cuban (special), $10.00 can. Natural Foods Institute, 624 Prospect Avenue, Cleveland, Ohio.

HONEY AND WAX WANTED

WE PAY CASH for extracted clover honey. Fairfield Honey Company, Millersport, Ohio.

WANTED—White and amber honey; any amount. D. F. Treap, 317 Keenan Ave., Cuyahoga Falls, Ohio.

WANTED—Comb and extracted clover honey. New York State preferred. Blossomdale Apiaries, Warrensburg, N. Y.

HONEY AND BEESWAX—Highest prices paid. Mail samples. Advise quantity. BRYANT AND COOKINHAM, LOS ANGELES, CALIF.

COMB HONEY WANTED—State size sections, how packed, and the quantity you have. Frank H. Hauck, P. O. Box 84, Kew Gardens, N. Y.

BEESWAX — Highest cash prices paid. Send sample and advise quantity available. MUENCH-KREUZER CANDLE CO., INC., Syracuse 1, N. Y.

HIGHEST cash return made the day we receive your beeswax Write for shipping tags and quotations. Walter T. Kelley Co., Paducah, Kentucky.

CASH FOR YOUR HONEY, extracted or comb. Regular trade, send sample. 60-pound cans furnished, if desired. W. R. Moomaw, Stone Creek, Ohio.

WANTED—All grades of comb and extracted honey. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th St., Detroit, Mich.

HONEY WANTED—All Grades and Varieties. Highest Cash Prices Paid. Mail Samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, Calif. .

CLOVER HONEY WANTED—Top prices for extracted section, and shallow frame comb. Truckloads or carloads. Tell us if you can deliver. KEDASH BROTHERS, Chillicothe, Ohio.

CLOVER HONEY WANTED — Large or small lots. Would like to establish permament connections with several good producers. Ellsworth A. Meineke, R. 1, Arlington Heights, Ill.

WANTED—Comb or chunk honey, prefer light honey, any amount. Lose Bros. 206 E. Jefferson, Louisville 2, Ky.

TOP CASH ceiling price paid for your extracted honey, any amount. Honeymoon Products Co., 39 East Henry St., River Rouge 18, Mich.

HONEY WANTED—300,000 lbs. of honey was packed by us last year. We need that much for this year also. A postcard will bring our truck. We pay cash ceiling prices plus tin. If you wish to pack some of your honey for local trade we can bring along the glass or tin you need. You'll do better with the ALEXANDER CO. than with a distant corporation. Send your card today to the ALEXANDER CO., 819 Reynolds Rd., Toledo 7, Ohio.

FOR SALE

I SELL BEST outfit for finding bee trees. Grover, Bristol, Vt.

MY FAVORITE BEE VEIL. Write for description and price. G. M. Ranum, Mount Horeb, Wisconsin.

POLLEN TRAPS, three sizes, approved by Dr. Farrar, $2.50 each postpaid. Geo. De Koeyer, Baraboo, Wis.

QUEENBEE PAINTING outfits $1.00, colony records 10-15c postpaid. Southwick Apiaries, Waban, Massachusetts.

CLOSING OUT SALE—We have 55 cases of 5 oz. Masterline honey jars (2 doz. per case), at 60 cents per case, F.O.B. Medina, The A. I. Root Co.

FOR SALE—Almost new 50 frame, three speed Woodman Radial Extractor, fully equipped. Alexander Co., 819 Reynolds Rd., Toledo 7, Ohio.

COMB FOUNDATION at money-saving prices. Wax worked at lowest rates. Comb and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

WRITE FOR CATALOG. Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

SAVE MONEY by letting us work your wax into wired regular comb foundation. Large catalog describes everything. You pay only wholesale factory prices as we have no agents. Walter T. Kelley Co., Paducah, Kentucky.

FOR SALE—20-frame Simplicity extractor. Like new, used one season for 75 colonies. Will sell for $90.00 F.O.B. Idaho Falls, Idaho. Cpl. M. C. Hartwell, Tng. Sq. Sec. E., Alamogardo, New Mexico.

FOR SALE—6-room modern house, 6 acres, 110 colonies (certificate of inspection furnished), honey house, equipment for 250 more, finest clover section, paved street, one block of stores, 12 miles from Ludington. Hayward Apiary, Custer, Michigan.

SMALL BEE RANCH. Sale or partnership. Chas. Watts, Coquille, Oregon.

FOR SALE—Four frame non-reversible power extractor. Frank Kearns, Austin, Minn.

BEEKEEPER'S HOIST lifts stack to inspect brood, bottom super, Demaree. 40 lbs., $20.00, f.o.b. Corning, Iowa. T. B. Turner.

YOUR WAX worked into high quality medium brood foundation for 16 cents pound, 100 pounds, $12.00. Fred Peterson, Alden, Ia.

FOR SALE—Cowan Extractor, 80 shallow supers, with frames, some foundation, 200 beeway section holders, 500 sections. Dwight Brunson, Mulberry Grove, Ill.

TRAP FOX AND COYOTE, on bare ground or deep snow. Learn modern tricks to outwit the sly furbearers. Free illustrated circular. Q. Bunch, Welch, Minnesota.

FOR SALE—1000 2-story 10-frame colonies, guaranteed free from disease, 1½ ton truck, extractor, etc., if desired. Located center of California package bee belt. Reasonable price to cash buyer. Smaller units if desired. Westacres Apiaries, Davis, Calif.

FOR SALE—Three acres good land, fine two story house of 7 rooms, finished in oak, modern bath, hot and cold running water, electricity, slate roof, furnace, full basement, recently redecorated. Good shop 30 x 50 ft., also building 14 x 18, located on Pymatuning Lake road, close to lake; excellent fishing and boating. 40 colonies of Italian bees mostly in new Root chaff hives, guaranteed disease free. Price on all, $4,600 cash or will sell place separately. Chas. B. Hatton, Andover, R. 2, Ohio.

BEES AND QUEENS FOR SALE

BRIGHT ITALIAN QUEENS, $1.00 each. D. W. Howell, Shellman, Georgia.

GOLDEN ITALIAN QUEENS, $1.25 each any number. Carolina Bee Farm, Graham, N. C.

CAUCASIANS, untested queens. $1.00 each, Lewis & Tillery Bee Co., Greenville, Ala.

PACKAGE BEES for 1945. Now booking orders. Crenshaw County Apiaries, Rutledge, Alabama.

NORTHERN-BRED Queens. Hardy honey producing Italians, $1.00 each. Shirl Baker, Rodney, Michigan.

30 colonies, with supers and extractor. Bees guaranteed disease free. Vincent Stegenga, Olivet, Michigan.

REAL PETS, Brown's stingless bees, Queen, $1.25 for the season. Brown's Apiary. Cape May Court House, N. J.

FOR SALE—300 colonies bees in Northern Ohio, guaranteed free from disease. Write for particulars. John Bour, Tiffin, Ohio.

350 colonies, plenty equipment, honey house with apartment. Certificate of inspection furnished at time of sale. Strickler Bros., Pascagoula, Miss.

THREE-BANDED Italian bees and queens finest quality. Package bees, 2-lb. and queen, $3.50; 3-lb. and queen, $4.50; select untested queens, 1-25, $1.10; 25-100, $1.05; 100 up, $1.00. Health certificate with every order. Alamance Bee Co., Graham, N. C.

HONEY WANTED
Carloads and less, all grades.
Will pay top prices.
Would contract now for crop.
Also Beeswax.
H. & S. HONEY & WAX COMPANY, Inc.
285 Greenwich Street, New York, N. Y.

WANTED--Extracted Honey All Varieties
Send samples and delivered prices to
JEWETT & SHERMAN COMPANY
Cleveland, Kansas City and Brooklyn

Comb Honey Wanted
Advise quantity, grade, size section and how packed.
FRANK H. HAUCK
P. O. Box 84, Kew Gardens, N. Y.
Bank references furnished on request.

HONEY WANTED
Carloads and less than carloads.
Mail sample and best prices in all grades.
C. W. AEPPLER COMPANY
Oconomowoc, Wisconsin

HONEY WANTED
Carloads and less. All grades. Pay cash. Can furnish containers.
J. W. REITZ & BROS.
Summerfield, Florida

ITALIAN QUEENS
1-99 $1.25 each
100-up 1.10 "
ALBERT KOEHNEN
Live Oak, California

QUEENS - NORTHERN BRED - QUEENS
Bred from Italian stock of 30 years selective breeding. .I am a War veteran of 1918. Requeen with my queens and put the sting to the Axis. I am putting all of my queen sales into War Bonds. Keep the bees and bombers flying, and our boys fighting this war from dying. Buy war bonds, and my queens will help you and me buy more War Bonds.
Price on queens, $1.00 each
WEST BRANCH APIARIES
Grover Hill, Ohio

YORK'S PACKAGE BEES AND QUEENS

QUALITY BRED ITALIANS

The rush for package bees has ceased for the season. Our greatest handicap was the long drawn out rainy season all spring, plus the help shortage which delayed shipping to some extent, and we are very sorry this had to happen. A large number of orders had to be returned as we were booked up by early spring and in no position to accept further orders.

Some have already booked orders for 1945 and others are requesting information on early booking. To this, we are willing to book your order now subject to prevailing prices in the spring of 1945. We are not urging you to book now, but it may be advisable to do so as the trend seems to indicate an early sell out.

For the balance of this season we will continue to supply a limited number of packages of bees and queens at following prices.

Untested Italian Queens .... $1.10 each
2-lb. pkgs. of bees with queens $3.65 each
3-lb. pkgs. of bees with queens $4.75 each

Prompt Shipments

York Bee Company
JESUP, GEORGIA. U. S. A.
(The Universal Apiaries)

QUALITY BRED ITALIAN

QUEENS

85c Any Quantity

THE PUETT COMPANY
Hahira, Ga.

ITALIAN QUEENS

Bred for Prolificness only.
1 to 4, $1.00; 10 to 19 each, .90 p.p.
5 to 9, $ .95; 20 to 49 each, .80 p.p.
50 to 100, each, 75 cents
Air Mail, 8 cents extra
For larger amounts, write for prices. No C. O. D.
PLAUCHE BEE FARM
Hamburg, Louisiana

APIARY SIGNS

Apiary Signs, the silent guard. No good after honey is stolen or pilfered. Satisfaction guaranteed. Eight protectors, dollar, postpaid. Koenitzer, Muscotah, Kansas.

BE WISE—CAUCASIAN-IZE with Caucasian queens from Crom's Caucasian Apiaries, P. O. Box 24, Manteca, Calif.

IMPROVED ITALIAN Queens, 80 cents, from a strain that produced over 600 pounds per colony. Henry Loehr, Caldwell, Texas.

FOR SALE—900 colonies bees, also locations and extra equipment worth $8000, all for $10,000 cash. Inspection certificate furnished at time of sale. Marks Tupelo Honey Co., Apalachicola, Florida.

FOR SALE—55 colonies of bees. Four Standard deep supers each, plenty winter stores. Excellent equipment. Eight frame Root, reversible extractor. Glassware, new cans, extra equipment. Health certificate furnished. Good reason for selling. Donald E. Ham, Perrysburg, Ohio.

WANTED—MISCELLANEOUS

WANTED—Electric uncapping knife. R. Frost, 249-24 Thebes Ave., Little Neck, N. Y.

WANTED—To buy several hundred hives of bees and equipment suitable for package shipping or honey production in Georgia, Alabama or Florida. Write to E. R. Raley, 1846 Oakshire, Berkley, Mich.

HELP WANTED

WANTED—Man to take full charge of wax-working machinery. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

MAGAZINES

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy free. Yearly, 7s. 6d., International Money Order. Apply Editor, Indian Bee Journal, Jeolikote. Dist. Nainital, U. P. India.

READ the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars write to the Hon. Treasurer, P. O. Box 43, Cleveland, Johannesburg, S. Africa.

WESTERN CANADA BEEKEEPER, official organ of the Manitoba Beekeepers' Association, one year $1.00; in combination with one year's subscription to Gleanings in Bee Culture, $1.75. Wallingford Building, Winnipeg, Canada.

MANY BEEKEEPERS have proven raising fox, mink, nutria, muskrats, rabbits, highly profitable. Send dime for sample copy. Canada's oldest fur farming magazine tells how. Fur Trade Journal of Canada, Box 31, Toronto 2, Ontario.

DO YOU FIND it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any other magazine published. Subscription $1.50. Hotel Cactus, San Angelo, Texas.

THE BEE WORLD—The leading Journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free, 12 cents stamps. Membership in the Club, including a subscription to the paper, 10/6. The Apis Club. L. Illingsworth. The Way's End, Foxton, Royston, Herts, England.

PETTIT'S SUMMER QUEENS

Available through September only,
Prices,
1-24, 90c; 25-99, 85c; 100 up, 80c

We are more than half sold out of package bees for 1945, subject to prices in November.
Better Hurry!

• • •

MORLEY PETTIT
Tifton, Georgia U. S. A.

MOORE'S STRAIN

Away back in 1879, I commenced rearing Italian queens with the object of improvement constantly in view. By careful selection during all these years, I have succeeded in producing a strain of three-banded, leather-colored Italian bees known as Moore's Strain of Italians which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Send for descriptive circular and read reports from those who have tried them. Untested queens $1.00 each; 6 for $5.00; 12 or more 80c each.

J. P. Moore, Rt. 3 Palmouth, Ky.

Former address, Morgan, Kentucky
Safe arrival and satisfaction guaranteed

Mountain Gray Bees

PLEASE NOTE: We are sold out on queens for 1944 and until May, 1945. Thanks a lot for your cooperation.

BOLLING BEE CO.
Bolling, Ala.

BUY U. S. WAR BONDS AND STAMPS

BEFORE PLACING LARGE QUEEN

orders for immediate shipment this fall, contact us.

Due to the war conditions and the draft we cannot promise delivery on short notice

Package bees next year as usual.

Rossman & Long

Box 133 Moultrie, Ga.

ATTENTION

Carefully Produced Three - Banded Italian Queens For Commercial Honey Production

1 to 23	$.90 each
24 to 99	.85 "
100 or more	.80 "

Send cash with order in American funds. All orders will have prompt attention. Live delivery and satisfaction guaranteed.
"More than 20 Years of Commercial Queen Production"

JOHN C. HOGG
Tifton, Ga., U. S. A.

CHOICE ITALIAN QUEENS and package bees.
We have been furnishing queens and package bees through other shippers.
Let us furnish yours direct.
Write for prices.
CLIFTON APIARIES
P.O.Box 684 Oroville, Calif.

BETTER-BRED QUEENS---Three-Banded Italians

We are breeding from some record breaking queens, "better than ever". Rush orders filled promptly. Remainder of season, 75c each, any quantity.

CALVERT APIARIES, Calvert, Alabama

QUEENS—ITALIANS—QUEENS

Our stock is bred and selected to assure the highest quality possible. Compare them with any queens on the market and be convinced of their superior qualities.

Prices: 1-24, 90c; 25-99, 85c; 100-up, 80c each.

BESSONET BEE COMPANY Donaldsonville, La.

This photo shows portion of our queen bee yard containing over 6000 nuclei.

5,000 three pound package bees with queens available

Packages in Proportion	May we serve you
	3 lb. with qns. $5.00
	2 lb. with qns. 4.00
	Extra qns. 1.25
	By Express

OVERBEY APIARIES, BUNKIE, LA.,

Look for this Sign
QUALITY at LOW COST
When You Want

Trade Mk. Reg.
U. S. Pat. Off.

KELLEY—"The Bee Man"

Glass - Tin

16 oz. Economy Jars,	carton 24 each,	$ .70
32 oz. Economy Jars,	carton 12 each,	.42
5 lb. Economy Jars,	12 cartons,	5.00
	24 cartons,	9.95
60-lb. Square tin cans,	carton of 16,	5.40

Quick shipment from large Paducah stock

THE WALTER T. KELLEY CO.

Paducah, Kentucky

REQUEEN NOW

When you get your honey crop off and your bees are still gathering a little is an ideal time to requeen. The advantages are many — lots of young bees in the fall will insure better wintering, less spring dwindling, quicker spring build-up. Then too, these young queens will give you less trouble with swarming next spring. Why not try it this fall?

PRICES

Lots of:	**1 to 24**	**$ .90 each**
	25 to 99	**.85 each**
	100 or more	**.80 each**

The Stover Apiaries

Mayhew, Miss.

INVEST YOUR HONEY

DON'T JUST SELL IT

. . . market all your honey now through a reputable packer to assure yourself good future prices

•

THINK, Mr. Beekeeper, of the *real value* of the honey you've produced this year.

It's worth far more to you than just the quick profit you can get from any Tom, Dick or Harry.

Today, in addition to producing an immediate profit, every pound of your honey can be made an *investment* in your future prosperity.

Yes, what honey you sell today . . . if you sell it right . . . can help you get good prices on your honey crops in the years to come.

How can you make this wise investment? The answer is simple as A, B, C.

Sell every last pound you can of this season's honey to one of the big, reputable Packers whose names appear on this page.

Your Future Is Tied Tight To America's Branded Honey

Each of these Packers sponsors a brand of high-grade honey the housewife knows and trusts.

These Packers have spent . . . and are spending . . . thousands of dollars in advertising to teach the housewife new honey uses.

They have spent . . . and are spending . . . thousands to educate her to the difference between good honey and bad.

Thus, they have created what is by far America's largest single honey market. A big, growing and *permanent* honey market that is the Beekeeper's one best guarantee of continued *good sales* and *prices.*

So you see the future of the Beekeeper is tied tight to the future of these Honey Packers. That's why "teamwork" between Beekeeper and Packer was never more important than it is today.

Write Immediately To One Of These Trustworthy Packers

This being so, shouldn't you take time now to be forehanded? Shouldn't you decide this year to invest all your honey where every pound both now, and in the long run, will pay you best?

If you agree, sit right down and write to one of these trustworthy Packers. Tell him how much honey he may expect from you. Send him samples and give him full details. You'll be writing to a friend.

What about prices? Of course, you'll get top Prices. But that is not all. You'll be underwriting your own future . . . and the future of the entire honey industry . . . better and with more certainty than you can possibly do in any other way.

Cooperate Now With These Leading Honey Packers:

T. W. BURLESON & SON
Waxahachie, Texas

B-Z-B HONEY COMPANY
Alhambra, Calif.

H. J. HEINZ COMPANY
Pittsburgh, Pa.

THE JOHN G. PATON COMPANY, INC.
New York City

THE SIOUX HONEY ASSOCIATION
Sioux City, Iowa

SUPERIOR HONEY COMPANY
Los Angeles, Calif.

C. W. AEPPLER COMPANY
Oconomowoc, Wis.

TOWNSEND SALES COMPANY

E. D. Townsend **Northstar, Michigan**

I pay ceiling price for Michigan honey, either white, amber, or buckwheat. What have you? This price, $7.20 per can, is for honey at your door, in 60-lb. cans, no shipping case required. A postal card will bring our truck to your place at once. No new customers for honey wanted. Another year, when crop conditions are better, it is hoped to have honey for all comers. Until then, thanks a lot.

the Hubbard APIARIES

WRITE FOR FREE CATALOG

Quality Bee Supplies Factory Prices

Prompt Shipment from Stock

Satisfaction Guaranteed

THE HUBBARD APIARIES

Manufacturers of Bee Supplies

ONSTED, MICHIGAN

NORTHWEST HEADQUARTERS

—For—

HONEY CONTAINERS

We carry carloads of honey jars and 60-lb. cans in stock. Send for price list.

•

Lewis-Dadant Bee Supplies

•

Honey and Beeswax Wanted

Any amount, accepted in trade or will pay cash at ceiling prices.

HONEY SALES COMPANY
1806-08 No. Washington Ave.
Minneapolis 11, Minnesota

BUY U. S. WAR BONDS AND STAMPS

CAUCASIANS

Extra gentle, prolific, long tongue, little inclined to swarm, dependable workers—10% to 40% ahead of the average Italians. Foundation stock from the mountainous region of Terek, Caucasus.

CARNIOLANS

Build up rapidly even during unfavorable springs. Prolific at all times, very gentle, best of workers, 33rd year with them.

PRICES: Untested queens .... $1.00 each
Tested " .. 1.75 each

Queens by airmail, 6c extra per queen

Ask for prices and mailing dates in lots of 25 or more.

Replace your poor and failing queens during September.

Albert G. Hann, Glen Gardner, N. J.

2 Years $1.50

American Bee Journal—monthly: published and edited by beekeepers for beekeepers. Full of pictures and tips on care of bees and selling of honey.

—SAMPLE COPY FREE

$1.00 a year, 2 years $1.50 in U. S. and Canada. Combined with Gleanings in Bee Culture, both magazines. **ONE YEAR, $1.75.** This offer good only in the United States.

Address—

American Bee Journal, Hamilton, Ill.

TALKS TO BEEKEEPERS

(Continued from page 419)

once, but I hope it may never occur again.

Sometimes, we may heft hives of bees in the fall and be fooled on the amount of honey in the brood chambers. Possibly, we forget to estimate the amount of pollen in the combs. It pays to be absolutely sure that each colony of bees has an ample amount of honey for winter and early spring stores. We like to have the upper brood chamber, sometimes called the food chamber, crammed full of honey in addition to what honey there may be in the lower brood chamber. More bees die from starvation than from any other cause.

(9) Did you ever try to winter diseased colonies? Occasionally one may find a colony with one or two cells of AFB late in the season. There is a temptation to winter such a colony with the idea of treating it the following spring. Such a procedure is positively dangerous. Get rid of AFB the day it is discovered by Cyanogasing bees and burning the contents of hives in a deep pit.

JENSEN'S

"Magnolia State" Strain Italian Queens. RIGHT NOW SERVICE. For bees with character, hustle and beauty, plus gentleness and hardiness, use our queens in your requeening. Three-banded Leather Colored Bees, distinctively brownish, not bright yellow.

Now booking orders for next spring delivery. Indications already point to an early sell-out for 1945.

Queen prices for balance of season:

1-24, $1.05; 25-99, $1.00; 100 and up .95 each.

Jensen's Apiaries

Macon, Miss.

QUEENS: Progeny-Test 3-Banded Italians

QUEENS: Daughters of Stock Bred for Resistance

QUALITY AND SERVICE

Do you want Queens that winter better, produce larger crops, have long life without supersedure, less inclined to swarm and resistancy to afb? We suggest you try a few MRAZ STRAIN QUEENS. These breeders are the pick of 800 colonies with proved characteristics to survive Northern Vermont climate. They may prove successful in your territory.

All shipments fully protected by Health Certificates

PRICES: Queens, 1-24, 90c; 25-50, 85c; 51-99, 80c; 100 and up, 75c

GARON BEE COMPANY

DONALDSONVILLE, LA.

Telegram—Western Union **Telephone 8614**

QUEENS

ITALIANS — **Daughters of Queens bred for Resistance**

CAUCASIANS — **Bred to Italian Drones**

QUEENS balance of this year $1.00 each. Send for Free Circular.

2 lb. pkg. bees with queen, $4.00; 3-lb. pkg. with queen, $5.00

Over 25 years a shipper in U. S. A. and Canada.

BLUE BONNET APIARIES, Route I, Box 70, Mercedes, Texas

Service Service

We appreciate very much the difficulty that many of our customers have faced in trying to take care of their bees and the honey crop. Valuable suggestions have been given in numerous cases. It is none too early to check over the condition of your equipment and plan for next year when we hope conditions will be better.

We wish our customers would write us about their wants so we can give them the best kind of SERVICE when the supplies are needed.

Root QUALITY BEE SUPPLIES

"Best by the Bee Test"

The A. I. Root Company,
12 W. 21st St., New York 10, N. Y.

A. I. Root Co., of Chicago
224 W. Huron St., Chicago 10, Ill.

A. I. Root Co., of Indianapolis
121 N. Alabama St., Indianapolis 4, Ind.

A. I. Root Co., of Syracuse
1112 Erie Blvd., East, Syracuse 3, N. Y.

The A. I. Root Co., of Iowa
Council, Bluffs, Ia.

• • •

We have a good stock of Honey Containers. Order NOW!

TOO LATE TO CLASSIFY

FOR SALE—5000 new 6¼ inch frames, at $4.85 per 100. Hercules non-sag foundation for same at 60c per lb.; 75 telescope 10-fr. covers with inner covers and composition tops, new, $1.00 each; 500 new 60-lb. cans, 30c each. Oliver Meyer, Preston, Iowa.

TWELVE colonies filled with this year's honey, plus extra supers and equipment at less than cost with honey free. Must be removed by Nov. 1. Inspection certificate furnished. W. P. Hadley, Collinsville, Ills.

ST. ROMAIN'S "HONEY GIRL" ITALIAN QUEENS

1 to 3 inclu.	$1.00 each
4 to 9 inclu.	.90 each
10 to 23 inclu.	.85 each
24 or more	.80 each

Postpaid. Queens arriving dead or hurt will be replaced if returned promptly.

St. Romain's "Honey Girl" Apiaries
MOREAUVILLE, LA.

ITALIAN QUEENS
Northern Bred for business, safe arrival
47 years breeding experience
Untested, .90; 3, $2.50
Select, $1.25
I. F. MILLER, 103 N. Carver Street
Warren, Pa.
Formerly of Brookville, Pa.

STEEL DRUMS FOR HONEY
Ship your honey in Steel drums (no leakage in transit)
Drums free to our shippers. Write us.
THE FRED W. MUTH CO.
229 Walnut St. Cincinnati 2, O.

NORTHERN BRED
Leather Colored Italian Queens from stock bred for resistance
(Our own strain)
$1.00 each; 25 or more, 85 cents each
DIEMER BEE CO.
Liberty, Mo.

HELP YOURSELF
And us by requeening this fall. As one of the few remaining Northern queen breeders we cannot always promise good queens early in the spring, but in the fall we produce large numbers of our finest queens during the buckwheat and goldenrod honey flow. A good young queen now just about insures next season's honey crop. Prompt delivery of honey gathering Italian stock.
Untested, 1-9, $1.00 each;; 10-24, 90c each; 25-100, 80c each; 100 and up, 75c each. Young tested queens, $2.00 each. Safe arrival and satisfaction guaranteed of disease free stock.
WHITE PINE BEE FARMS
Rockton, Pa., L. B. 80

The Monthly Honey Market

SUMMARY

It is becoming increasingly evident that this year's honey crop will again be below average. Dry weather has seriously reduced the clover flow over much of the northern area from the New England States to the Mississippi River. Conditions are especially poor in the Ohio Valley and portions of the North Central area. Over the Plains Area conditions are somewhat better with some sections predicting a crop of close to normal proportions, while other large sections will show a total production below average. Portions of the Intermountain area will have very good crops, while other sections report below average yields. The total crop in California will be much below normal; in the Pacific Northwest the clover and vetch crop was fair; and in eastern Oregon and Washington the clover-alfalfa crop is running around normal in most sections. In the fireweed sections of Oregon and Washington a short crop is predicted, due to excessively dry weather. Crop conditions through the southeast and portions of the southwest have been fairly good. With the continued dry weather over much of the northeast and north central States prospects for a fall flow are now poor. In many areas young clover seedings have suffered with the result that clover acreage next year may be small. Bees in all sections are in generally good condition.

Extracting is beginning in all northern areas. The quality of the honey crop in the Clover Belt is unusually good, being of heavy body and very light color except in New York where much of the honey is rather dark. Demand for honey both locally and on the part of large packers and buyers is somewhat lighter than at this time last season. However, many orders are being placed for carload lots where available. Considerable dark strong honey is still to be found in the hands of wholesalers and retailers which is limiting the demand for better grades of honey. Prices for honey continue at ceiling levels for practically all grades and flavors except for some dark southern honey which is selling slightly below the ceiling. Offerings of beeswax are very light and prices continue at ceiling.

Shortage of labor is slowing down beekeeping and extracting operations in many sections especially among large commercial beekeepers. In most sections the container situation appears to be quite satisfactory although there is a shortage of small tins and in some local areas the supply of glass containers may be temporarily short. Sales of small containers in many sections has been quite heavy, with the sale of 60-lb. cans lighter than normal which would indicate that many beekeepers plan to pack and sell their honey locally in small containers in much the same manner as they did last season.

Amendment 42 to Revised Rationing Order No. 3, effective August 16, delegates the authorization of the extra 15 pounds of sugar permitted under the Rationing Food Order for the feeding of bees in case of necessity to the County AAA Committee rather than to the County USDA War Board, as has been the case in the past.

Monthly Report of Honey Producers

August Date Rec.	State	Name	(1) Honey Flow	(2) 5-year Av.	(3) Large lots Ex. Comb	(4) To Grocers Comb	(5) To Cons. Ex. Comb	(6) Movement	(7) 1943 Holdover
11	S-Ala.	J. C. Dickman	50	50				Fair	
10	S-Calif.	L L Andrews	25	25				Fair	0
10	SE-Colo.	O. E. Adcock	100	125			.25	Slow	0
5	E-Conn.	Allen Latham	100	100				Slow	
10	S-Fla.	C. C. Cook	100	125				Slow	0
8	C-Fla.	Harry Hewitt	60	75				Fair	0
14	SE-Ga.	J. J. Wilder	100	115		5.80		Rapid	0
9	NC-Ills.	A. L. Kildow	25						0
4	S-Ills.	Carl E. Killion	25	25		7.00	.35	Rapid	0
7	NC-Ind.	T. C. Johnson		25		6.00	.33	Fair	0
7	NW-Ind.	E. S. Miller	80	100		6.75	.35	Fair	0
10	W-Iowa	E. G. Brown	50	50			.35	Rapid	0
5	N-Mich.	Ira D. Bartlett	160	175				Slow	0
9	C-Mich	E. D. Townsend	20	30				Rapid	
9	SW-Minn.	L. A. Syverud	100	100				Slow	0
14	W-Minn.	B. L. Morehouse	75	80				Fair	5
18	S-Minn.	J. F. Garner	30	30				Slow	0
15	C-Nebr.	J. H. Wagner	65	65			.27	Slow	0
19	W-Nev.	Mrs. E. G. Norton		80				Fair	0
9	W-Nev.	Geo. G. Schweis	40	40				Fair	0
10	W-N. M.	C. A. Baltzley	100	100			.45	Fair	0
10	NW-N.Y.	Geo. B. Howe	50	50				Fair	
7	C-N.Y.	F. W. Lesser	30	30				Fair	0
7	NW-N.C.	C.S.Baumgarner	100	125			.40	Fair	0
10	SE-N.C.	W. J. Martin	100	110			.35	Fair	0
4	C-Ohio	R. D. Hiatt	80	100			.40	Fair	0
10	NC-Okla.	C. F. Stiles	65	80				Fair	0
8	C-Penn.	Harry Beaver	90	90				Fair	0
9	SE-Penn.	D. C. Gilham	100	110		6.00	.35	Fair	0
8	C-Tenn.	J. M. Buchanan	90	100				Fair	0
10	E-Tenn.	W. L. Walling	75	75				Fair	0
10	C-Tex.	T. A. Bowden	75	75				Fair	0
7	S-Tex.	C. G. Mayes	20	60				Rapid	0
10	S-Tex.	H. B. Parks	96	98				Rapid	0
8	W-Utah	Wm. Moran	75	90				Rapid	0
18	S-Va.	T. C. Asher	100	125			.35	Fair	0
9	N. Wyo.	Earl C. Reed	110	125		6.00	.35	Fair	0

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60-lb. Cans (used—subject to being on hand)	each .25
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